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ABSTRACT

The Pennsylvania School Improvement Program (PSIP) was created to assist local schools and school districts in the development of curriculum improvement strategies. The process involves the use of "linkers," curriculum specialists who work with teams from the local level to ascertain needs, then connect the local teams with the research and development agencies that can provide information and resources to help meet those needs. One early attempt to make PSIP work in an urban elementary school lasted about 30 months. At the end of the project the school was prepared to implement curriculum improvements that had been selected during the process. In this instance, the School Assistance Team (SAT), composed of representatives of several research and development agencies as well as the Pennsylvania Department of Education, communicated well with the Local Action Team (LAT) of teachers. Some personality conflicts were ironed out during the project, which improved as it developed. The LAT felt the program took too long to achieve its results, but participants were generally satisfied. Analysis of the relationships between participants in the project and of the effectiveness of the program's structure and management provide ideas for improvements to be incorporated in future PSIP efforts. (Author/PGD)

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# PENNSYLVANIA SCHOOL IMPROVEMENT PROGRAM

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## LINKAGE CASE STUDY

**Intermediate Unit B**

This report was prepared as part of the Research and Development Utilization Program for:

**National Institute of Education**
**1200 19th Street, NW**
**Washington, D.C. 20028**

Bureau of Research and Evaluation
Office of Research, Planning and Data Management
Pennsylvania Department of Education

January 1980

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Bureau of Research and Evaluation
Office of Research, Planning and Data Management
Pennsylvania Department of Education



AUG 4 1980

# Linkage Case Study
# Pennsylvania School Improvement Program (PSIP)

NIE R&D Utilization Project
Intermediate Unit B
School N

Dr. J. Jackson Barnette
Consultant to PSIP
June 1979

This linkage case study was generated with financial support of the National Institute of Education, through a subcontract between the Pennsylvania Department of Education and the author. However, the content, including interpretations, does not necessarily represent the position or policy of either agency, and no official endorsement should be inferred.

The author assumes full responsibility for any inaccuracies of fact or interpretation represented in this document. The author acknowledges the assistance of Ms. Peggy Vanco in the editing and final preparation of this linkage case study.

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# I. Background and Formal Plan

## A. The Agencies

This section discusses pre-PSIP interagency relationships, describes the developments that led to the PSIP, and presents the PSIP intents, linkage roles and responsibilities as specified in the original project descriptions.

### 1. History and Mission of Agencies

Working with a local school district involved in PSIP, are representatives of three R&D oriented agencies. The State Department of Education, and the respective intermediate unit. The three R&D oriented agencies, as described in the PSIP information brochure, are:

(1) Learning Research and Development Center (LRDC)

The mission of the LRDC, part of the University of Pittsburgh, is to develop, study and evaluate adaptive education environments for schools. LRDC has experience in instructional design, curriculum analysis, policy analysis, teacher education and computer application in education.

(2) Research for Better Schools (RBS)

RBS is a private nonprofit educational laboratory established in 1966. Its mission is (1) to research and develop instructional systems and materials to improve educational processes for preschool through adult programs and (2) to assist regional education agencies in preparing and carrying out changes in the educational program.

(3) Research and Information Services for Education (RISE)

RISE operates under primary sponsorship of the Montgomery County Intermediate Unit in cooperation with the Pennsylvania Department of Education. RISE has broad experience in disseminating information on curriculum research drawn from local, state and national resources.

The Pennsylvania Department of Education (PDE) is legally responsible for operating educational programs in the Commonwealth. Services of PDE which relate to PSIP are:

(1) Development of a set of ten goals for the Quality Education Program.

(2) Development of a set of measures that provide information regarding student performance along dimensions implied by each of the goals.

(3) Organization of part of the State Department's Program staff to provide technical assistance to districts for interpretation of the results of the assessment and implementation of plans.

P. Stank, 10-76

Intermediate Units (IU's) were established in 1970 for provision of consultative, advising and program services to local school districts. There are 29 such units in Pennsylvania. Seven mandated services are provided through IU's.

(1) Curriculum Development and Improvement Services--Designed to assist classroom teachers in the areas of instructional programs, staff development and in-service education.

(2) Educational Planning Services--Relating to Pennsylvania's Long Range Planning process, assisting local district administrators and LRP committees, which involve professional staff and community representatives.

(3) Instructional Materials Services--Providing classroom teachers and students with a variety of current media materials and instructional tools.

(4) Pupil Personnel Services--Assisting districts through the use of the data-processing services at the area vocational-technical school in scheduling, grading and attendance.

(5) Continuing Professional Services--Assisting local district teachers, administrators and board members through seminars, workshops and in-service programs dealing with the current educational problems, regulations and guidelines.

(6) State and Federal Agency Liaison Services--Providing local districts, administrators and board members with current legislative interpretations and assisting districts in their application procedures for Federal and State exemplary programs.

(7) Management Services--Providing technical assistance in the area of management and finance to local districts and compiling regional and state surveys.

P. Stank, 10-76

2. History of Relationships

Interagency relationships of the three R&D agencies and PDE were, prior to PSIP: a high degree of awareness of each other, and, in several cases, direct collaboration. Each of the agencies has a well-specified set of activities and services which tend to complement rather than compete with each of the others. Some of the more prominent collaborative efforts have been:

(1) LRDC and RBS have been working together over the past ten years in the development, field testing, and implementation of IPI materials and processes. They have often shared staff members and hired persons from the other agency. There is a feeling of shared responsibility in terms of LRDC conducting basic research and RBS implementing programs in field settings.

(2) RBS and RISE have worked closely together since the beginning of RISE. They have developed proposals cooperatively and supported, through provision of services, each other's efforts.

(3) RBS and PDE have worked cooperatively for the past several years in statewide planning efforts. RBS has as a member of its board a high level PDE staff member.

(4) RISE has worked closely with PDE to provide services and disseminate information on PDE projects, especially those of the PDE office of Basic Education.

There have been a few cases of conflict of mission and services, mostly between LRDC and RBS. These have tended to be minor and somewhat expected due to the nature and close

proximity of the two agencies. However, differences have been worked out mutually and with greater understanding of the respective roles and responsibilities of each agency.

All three of the R&D agencies and PDE have worked closely with various intermediate units in the state and had some involvement with the case study site IU prior to the project.

3. Motivations to Participate

Prior to the PSIP commencement, RBS and LRDC had been working with PDE, in response to a paper by Hutchins (NIE) on linking labs and centers for dissemination of R&D products for meeting local school needs, in the area of installation of programs in districts with low scores on the Pa. Educational Quality Assessment (EQA) program of PDE. Based on this initial work, the group responded to an NIE-RFP for utilization of R&D outcomes in providing assistance in improving basic skills in local school settings. This was slightly different than the original intent which was focused on EQA. All of the agencies were to develop parts of the proposal with RBS taking the major responsibility of putting the final proposal together. RBS developed the final technical proposal and RISE developed the final budget proposal. NIE had certain concerns and questions regarding the general scope of work, the division of responsibilities and funding levels for the participating agencies. Modifications were made in these areas and the project was funded for thirty months to begin July 1, 1976. Subsequently, RDU projects were given the opportunity to apply for an additional six months of funding from NIE. Additional funding was approved, extending the project duration through June 1979.

4. The Proposed Structure

a. Schematic Description

Figure 1 presents the overall PSIP structure in terms of primary and secondary linkages. The School Assistance Team (SAT) is made up of representatives from RBS, LRDC, and RISE. Overall management and internal project evaluation are provided through PDE. The SAT works collaboratively with the IU linkers to provide guidance and technical assistance to the LEA group of teachers which make up the Local Action Team (LAT). One of the teachers in the LAT serves as a teacher leader or LAT coordinator.

b. Agency Responsibilities and Exchanges

The PSIP brochure describes, in general, the intents of the program as follows:

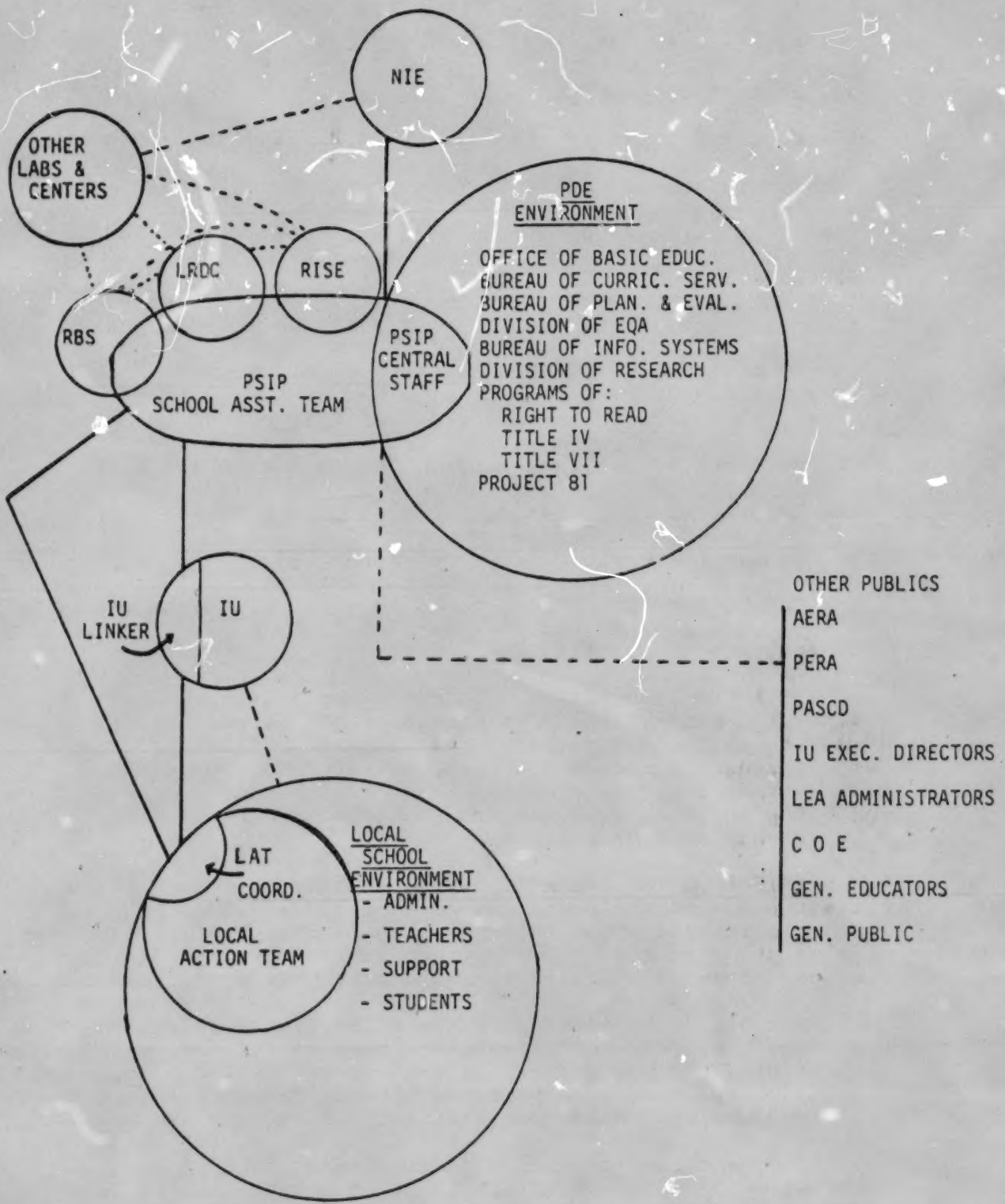
"The Pennsylvania School Improvement Program (PSIP) links the Pennsylvania Department of Education, intermediate units, and research skills instructional programs. The research agencies are: (1) Research for Better Schools, (2) Research and Information Services for Education and (3) the Learning Research and Development Center of the University of Pittsburgh.

PSIP's objectives are, first, to help schools analyze their needs in the basic skills area and second, to help schools improve student performance in basic skills by using the best available instructional programs and techniques produced by research and development activities.

Schools participating in the Pennsylvania School Improvement Program go through four phases: (1) needs definition, (2) knowledge consolidation, (3) selection process and (4) implementation process. These phases in turn are broken down into numerous staff activities.

The benefits to schools participating in PSIP are: an upgrading of staff skills in using needs analysis techniques to improve instruction, documentation of priority areas for improving the basic skills program, technical assistance in reviewing and selecting available options, and technical assistance during the implementation of educational changes.

Figure 1




PSIP LINKAGE STRUCTURES - PRIMARY AND SECONDARY LINKAGES

The Pennsylvania Department of Education is responsible for managing and coordinating PSIP activites. Staff from the Office of Basic Education will participate in program activities."

The overall program organization is as follows:

| The School Assistance Team (SAT), Made up of representatives of: | Works with the IU through: | To provide guidance and technical assistance to the Local Action Team (LAT), Made up of potential members such as: |
|---|---|---|
| PDE<br>LRDC<br>RBS<br>RISE | IU Linker | Administrators<br>Teachers<br>Support Staff<br>Parents<br>Community Persons |

Relative to the total PSIP effort, SAT members included: two persons from PDE (an overall program director and an evaluator), two persons from LRDC (an agency PSIP coordinator and a curriculum specialist), three persons from RBS (an agency PSIP coordinator and two staff members), and three staff members from RISE (director, assistant director, and information specialist). The intermediate unit provided a full-time linker for the PSIP, supported by project funds.

In the work with the linkage case study site in IU-B, there were two different linkers. The original one resigned her position in September 1977. Her replacement served as linker throughout the remainder of the project. In addition, IU-B hired an administrative assistant to support the work of the linker. Not all of the above SAT agency representatives worked with the IU-B linkage case

study site. Those who did, and the degree of their involvement, are described in more detail later in this section. Composition of the LAT in the linkage case study site is discussed in greater detail in the next part of this section.

The PSIP brochure describes the four phases (needs definition, knowledge consolidation, selection, and implementation) of the process. Following are these descriptions:

Needs Definition

> Needs definition is the first phase of school participation. A Local Action Team (LAT) made up of school staff and members of the community work cooperatively in a problem-solving process with a School Assistance Team (SAT) consisting of representatives from the participating agencies.

The needs definition phase has four major activities:

1. Orientation: The SAT assists the LAT in identifying a broad area of need in basic skills instruction. Preliminary review includes both EQA data and local test information.

2. Analysis of Student Needs: The LAT and SAT work together to determine the nature and the scope of the area of need in basic skills instruction. Student performance goals and teaching objectives are determined.

3. Analysis of Program Needs: The LAT and SAT work together to identify school, home and peer group influences as well as classroom processes as they relate to existing programs and the needs of desired programs.

4. Program Needs Description The LAT develops a statement of the specific area of need. The statement defines the discrepancies in current basic skills instructional programs. Standards are developed for screening the approaches to be considered for implementation.

Knowledge Consolidation

This phase consists of two basic activities. One is a comprehensive literature search on what research and development says about (1) basic skills learning and instructional theory and general learning theory, (2) principles of diffusion and dissemination activities, and (3) school organization and curriculum development processes.

The other activity is the outcome search or the process by which the outcomes of research and development are identified. The list is narrowed, refined, analyzed, described and presented for classroom use.

The three major tasks of the outcome search are: (1) to identify effective educational practices in basic skills instruction, (2) to screen the educational practices for validity and availability and (3) to analyze the educational products and practices using standards developed during the needs definition phase and to provide a bank of appropriate usable alternative practices for basic skills instruction.

Selection

The LAT and SAT review the information gathered during the knowledge consolidation effort using the standards developed through needs definition. The selection process involves: (1) developing final selection criteria related to local school conditions, (2) screening possible educational practices using LAT standards, (3) selecting the practice that best meets the standards and (4) producing a general plan for implementing the educational practice selected.

Implementation

The SAT and the LAT will work together during the following implementation activities.

1. Planning: A realistic action plan detailing activities, time lines and cost estimates is developed. Responsibilities are defined and assigned for both LAT and SAT members.

2. Preparation: Staff, materials and facilities needed for the new instructional processes are obtained. Staff members are trained for the new instructional program.

3. Operation: The new instructional process begins, allowing for modification and ongoing evaluation. Both the LAT and SAT are actively involved in the operational activities.

4. Transition: The trial period of the new instructional product or process is reviewed, and evaluation reports are considered to determine if the new instructional practices have been successful, whether they are more efficient and effective than the previous practice and whether they should be retained. The SAT can help to interpret the information, but the LAT makes the recommendation for the final decision.

Responsibilities for PSIP activities were designated as follows:

(1) PDE--Project management, documentation, and evaluation

(2) PBS--Needs assessment and R&D outcome implementation

(3) LRDC--Program analysis (part of needs assessment) and (with RISE) knowledge consolidation

(4) RISE--Knowledge consolidation and selection

These are primary responsibilities. In actual practice, all of the agencies were to be involved in all of the activities at least on an advising and approval basis. This was to be accomplished through several SAT meetings, many of which included other agency personnel and the case study site IU linkers.

Functions of the Local Action Team (LAT) were specified as follows:

(1) To define the basic skills problem to be addressed in the local school.

(2) To analyze alternative means of attacking the problem.

(3) To develop a course of action for dealing with the problem.

(4) To involve other members of the school staff, students, and extended community.

(5) To assist in the implementation of the action plan.

(6) To communicate progress to all interested parties.

(7) To assist in evaluation activities.

5. How Structure Was Created

Prior to the NIE-RDU Project, informal discussions had been taking place between the PDE Commissioner for Basic Education and the directors of RBS and LRDC in the area of improving school practices relating to the Pennsylvania quality goals of education (EQA). A concept paper was prepared by staff at RBS and LRDC which was related to providing assistance at the local level in basic education areas. When the RFP for the RDU Projects came out, these three agencies felt the RDU Project provided the opportunity to get funding to pursue the ideas which had been discussed between the agencies for almost two years.

The original intent, concentrating on EQA, had to be broadened for the purpose of the RDU effort. Since RISE had been active in dissemination efforts in the state and since RBS and RISE had been working together on prior efforts, RISE was brought in to be involved in the proposal stage of the project.

There were some problems in getting the RDU prposal together. Each agency wrote a piece of the proposal and RBS took on the responsibility for putting it together. Problem areas included agency roles, distribution of funds, and specificity of the scope of work. These areas were further specified for NIE and funding approval.

The two intermediate units, referred to as A and B, were involved in the project as a result of previous involvement

with the PDE-EQA effort. They had been involved in the development of the RDU proposal.

It was decided that overall management and evaluation of the project would reside with PDE. RBS, RISE, and LRDC would provide technical assistance to the project. These agencies would work through the intermediate unit in providing project services to local teacher groups. The primary linking agent was to be at the intermediate unit level. A major focus of the project was to train and provide technical assistance and resources to the IU linker in such a manner that ultimately the IU linker would be able to replicate the project activities in other IU school districts with minimal involvement of the original agencies. This IU linker would rely on extensive guidelines provided in the PSIP Handbook for conducting program description, needs assessment, product selection, implementation, and evaluation in the original and subsequent local sites.

Staff for the project were assigned by the participating agencies. For the most part these individuals were not involved in the original project design and proposal development. The project director was hired as an outside PDE consultant, providing services on a contracted basis, not as a regular PDE staff member. A staff member of the PDE evaluation division was assigned full-time to serve as project internal evaluator.

B. The Site

One local school district was designated in IU-B as the linkage case study site. This site was chosen as a case study site because

it represents project operations in an urban area and was the only early entry PSIP site which was in an urban setting. This section presents a summary of the site description. For a more detailed description, see the site case study prepared by L. Peters on School "N."

1. General Geographic and Economic Description of Area

School N, which was one of the PSIP sites in IU-B, is located in a tri-city area in central, eastern Pennsylvania. The total metropolitan area is about 5,000 square miles. This area has the third largest population concentration in the state, with a tri-city population of more than 600,000. The city which includes School N has a population of about 75,000.

The area was settled in the 1600's by Germans seeking religious freedom and tended to be an agricultural center in the East until the late 1800's, when it shifted to more of an industrial economy. In the 1920's and 1930's, there was a influx of ethnic groups who sought blue-collar employment in the steel industry and related industries. During the past few decades, there has been an influx of Puerto Ricans seeking employment opportunities. This is particularly true in the area served by school N.

The economic base of the area relies on the steel, transportation, chemical, textile, and retail sales industries. The area includes home offices for the second largest steel producer in the nation and a major trucking corporation. The total number employed in the area is about 230,000.

The area is served by four television and twelve radio stations. There are six major hospitals. Ten institutions of higher education, enrolling about 12,000 students, are in close proximity to the tri-city area. There are a variety of cultural and sports activities available.

2. School District which Includes School N

The school district which includes the case study site serves a population of about 95,000. Enrollment is about 15,500, with enrollment decline predicted to be about three to four percent per year.

Administrative staff includes a superintendent and four assistants for areas of instruction, business, personnel, and public relations. The district includes 19 elementary schools (N is one of them), four junior high schools, an alternative school, and two senior high schools. Relations between the board and administration are said to be good. The board tends to serve an approval function rather than a directive function. Various advisory groups such as a Community Liaison Council and a Curriculum Advisory Council have been set up. During the project, there was a change of superintendents. The one involved in the entry of the site into the project resigned at the end of the first project year. An acting superintendent was appointed for six months and then a new superintendent hired midway through the second project year. This shift in administration was accompanied by giving building principals more decision-making power.

The district staff includes about 900 teachers. Relations between teachers and the administration are generally good.

However, in the Fall of 1978, teachers went on an eight-day strike over salary and work condition issues. This strike had somewhat of a disruptive effect on project activities in School N.

3. School N

School N was constructed in 1924; renovated and expanded in 1973. Enrollment is about 650. About 30 teachers are on the staff of School N. The building has a principal and full-time, non-teaching resource teacher. In addition to the principal and resource teacher, the school staff is comprised of a guidance counselor, twenty-five teachers, six content area specialists, eight teacher aides, and seven part-time special instructors. In 1974, after the addition was completed, there was a shift into the school of personnel and students. The principal and resource teacher had worked in another school, from which most of the new students came. The principal was asked to be the School N principal in the expanded physical plant. He brought the resource teacher and a few other teachers with him. About 75% of the present school staff were new to School N in 1974-75.

School N serves a disadvantaged and high transient population in grade levels K-6. The school population is about 60% Hispanic (mostly Puerto Rican), 6% Black, and, the remainder, mostly students with other ethnic backgrounds. About 90% of the students qualify under Title I. Only about 50-60% of the student population tends to be continuous during the year. It is estimated that up to about 400 students per year either leave the school before the school year is over or enter the

school midyear. Many of the students, about 30%, come from single parent families. Student achievement on standardized tests tends to be in the 15-20 percentile range. Bilingual and English as a Second Language programs are a large component of the school's instructional curriculum, serving about 40% of the students in these programs. Absenteeism is about 10% per day. Class size average about 26.

The school staff tends to be rather young and well educated. When the project started, two of the teachers held doctoral degrees. The resource teacher was pursuing a doctorate in reading. Evidence of a high level of professional feelings are easily observed. The staff demonstrates knowledge of and ability to use non-traditional as well as traditional methods. Teacher teaming, success and self-concept programs, non-graded, and open classrooms are evidence of attempts to present instructional programs for students who would have a difficult time in traditional, graded programs. Elementary students (students who would be considered to be first, second, or third graders) attend a "family" or homeroom environment in the morning where activities are designed to improve self-concept and ability to work responsibly with others. A student attending all three of these years in the school would have the same family teacher. Student grouping for the family is based on multi-age and balance in racial/ethnic composition. In the afternoon, students go to different academic groups, where grouping is in homogeneous reading skill levels. In addition to bilingual and ESL programs, the school uses the High-Intensity Learning System to improve reading achievement.

Staff members are not strangers to recognizing the need for changes nor the use of R&D concepts and products in the improvement of instruction.

Teachers in School N feel they have a difficult time working with the community. They tend not to get a great deal of parental support and feel somewhat at a loss in having much influence on parental and community attitudes. Teachers work with ESEA Title I, Biligual Education Advisory Committees, and a Neighborhood Council, but still feel somewhat helpless in having meaningful community relations.

Within the school, however, it seems the staff has some behavioral influence on the students. In spite of the depressed area around the school, the building remains very clean and relatively free of vandalism.

4. Decision to Participate

In the Fall of 1976, the IU-B assistant executive director, who was the PSIP contact person for the IU, called the district superintendent to inform him of the project and get an initial assessment of interest in participation. The district superintendent indicated he was interested and School N would be a good urban site for the project. The superintendent contacted School N's principal who indicated he would be interested in finding out more about the program. Both the superintendent and the principal attended an orientation session conducted by the project director and the IU assistant executive director. Both individuals tended to be interested in the project because of its emphasis on improving basic skills and because of the promise of assistance from major research

agencies in bridging the gap between research producers and the local school. The orientation session was then held for the School N principal, the guidance counselor, the resource teacher, and a few other teachers in November 1976. At that point, the school was committed to entering the project. A few days later, the presentation was made to the entire School N staff. The staff agreed that it would be a good project in which to get involved. The selection of the LAT and LAT co-ordinator will be discussed in the Project Happenings section of this linkage case study.

C. The Linkers

1. Primary Linker, IU-B

Perhaps the most difficult and time-consuming role in the entire PSIP structure is that of the IU linker. In many ways, this individual has to function as part of both the SAT and the LAT. In this bridging position, the IU linker faces the greatest potential for strain between the SAT concerns for generic problem assessment and solution processes and the LAT concerns for immediate and specific difficulties resolution, sympathy, and aid. Consequently, the IU linker faces the greatest demand for integrative and coordinative skill. While PSIP is more organizationally complex than many other planned change strategies, the IU linker role within PSIP is perhaps a good example of the change agent role in the organizational development (O.D.) tradition. While there is a good deal of literature on the O.D. approach to planned change, there is little on the characteristics of such a change agent. It is probably true of most O.D. change agent roles, however, that

they all place high emphasis on gate keeping, service brokering, or linking skills. In most situations, the O.D. agent is not a change inducer, but a change facilitator, connecting particular clients in specific circumstances with knowledge and technology applicable to their particular problems. In many instances, the O.D. agent actually does knowledge consolidation and needs assessment actively without concentrated outside help. Often, access to knowledge and skills relating to these activities may be personal (or the organization's) past research experience. PSIP is different, in that it has brought basic and applied research specialists into direct, physical interaction with the O.D. agent. This arrangement should allow the IU linker more time to concentrate upon the practical and specific demands of each site and should make it far less likely that the linker relies on "pat" or standard problem solution strategies. An effective link between the IU linker and the SAT should allow the LAT rather than the change agent to make the actual problem solution selection. The commitment of each local site to implementation should be much greater in these conditions. The quantity and quality of resources provided the IU linker should also increase the opportunity for change capacity building within each school site, as well as within the IU itself.

The ability of PSIP to function in this manner is dependent upon the ability of the IU linker to call upon SAT resources effectively and to coordinate the SAT when it is on site. Part of the ability of the IU linker to perform as a change agent in PSIP will rest with the ongoing function and

mission of each IU. To the extent that the IU itself has a strong concern for local school improvement, it may use PSIP as a good opportunity to develop its own consultative and change agent capacities. If, however, IU's perform basically as a low-interactive service unit to its member schools, participation in PSIP is likely to be seen more as another, and perhaps temporary service. Hence, PSIP, and the IU linker role, would seem to be most effective in instances where the IU itself is seeking to expand its domain from ancillary school services to change agentry, or to build its capacity to function in the manner of PSIP, independent of direct and intense contact with the present SAT members.

During the PSIP activities in IU-B and School N, there were two persons who served in the linker role. The original linker, hired in December 1976, remained with the project until September 1977 when she resigned. In September 1977, a new linker was hired who remained through completion of the expected NIE funded aspect of the project. In this linkage case study, the first linker will be referred to as "linker-1" and the second as "linker-2." Reasons for this change and transition problems and activities are discussed later in this linkage case study.

a. Background Information, Linker-1

Prior to being appointed the IU linker, linker-1 had been a Title I project director and reading supervisor in a Pennsylvania county. In that position, she supervised work of five reading specialists and 120 reading teachers. For about three years prior to this position, she worked

with a Research Coordination Unit funded through HEW with funds for vocational education. Prior to work with the RCU, linker-1 had been an elementary teacher for five years.

Linker-1 received a bachelor's degree in elementary education and a master's degree in reading. She had been accepted for a doctoral program in reading.

The linker's experiences included work with teachers and administrators, but did not include linker-type activities. As a member of the Pennsylvania School Board's Association, she saw a pamphlet describing PSIP and a vacancy announcement for the IU-B linker position. She applied and was hired by the IU assistant executive director for the position.

Initial project role description of the linker was to: facilitate the entry of local sites to the project, coordinate the flow of information and assistance between the LAT and SAT, and provide direct assistance to the LAT in the absence of the SAT. Linker-1 did not seem to completely understand what was expected of her. Her initial expectations were that she was to work with school districts in dealing with problems in reading instruction. She found that the role was more as a liaison person and was somewhat disappointed that her expertise in reading was not to be tapped.

It is this writer's impression that linker-1 tended to be a rather independent person, tended to not feel the need for supervision, and was confident that she could

serve local school participants, even if it required seeking resources from other than PSIP agencies. Professional aspirations of linker-1 seemed to be beyond the project or IU.

b. Background Information, Linker-2

Linker-2 was hired in September 1977. She had been, and was to continue to be in 1977-78, a resource teacher at an elementary school within IU-B. Primary responsibilities as a resource teacher included working with regular classroom teachers and other school personnel in the development and implementation of individually prescribed programs for students with learning problems. Prior to work as a resource teacher, linker-2 was on the staff of another IU-B school for seven years. During the first three of these years, the linker taught a primary level learning disabilities class. During the next three years, she served as a resource teacher and worked with the National Learning Resource Center Project. During her last year at this school, she taught an intermediate learning disabilities class. During three of the seven years at this school, the linker served as head teacher and was responsible for building operations, coordination of staff, and implementation of IU policy.

Linker-2 holds a bachelor's degree in elementary education and specialization in education of the mentally retarded and a master's degree in reading. In addition, she has taken several other graduate level courses. She was selected as "teacher of the year" by a regional association for children with learning disabilities.

When linker-1 resigned, there was no time for initiating a long search process. The assistant executive director had worked with linker-2 and felt she would be a good person for the position. She indicated interest in the position, but only under the condition that when the project was over, she would be continued in the IU in a similar position to that held prior to the work on the project.

It is this writer's impression that linker-2 was somewhat more independent than linker-1, but she felt she could work within the project structure and depend on the assistance of the SAT agencies. She saw participation in the project as providing a new experience that did not risk her continuation in her prior position. Linker-2 is very self-confident and easily develops rapport with teachers and administrators. Her organizational and group dynamic skills are very good. These skills served her well in a difficult transition period from one linker to another.

Both IU-B linkers tended to be self-confident, somewhat independent persons. Both had some initial difficulty understanding the complex process and role responsibilities of agency representatives. Both had points of conflict, but for somewhat different reasons, with SAT members. Both possessed strong loyalty to the IU and the assistant executive director. Both expected and received strong support from the IU. Reasons why there was a great, project staff perceived, difference in ability to function successfully as the linker will be discussed in greater detail in this linkage case study.

In addition to the primary linker, there were several individuals who served as project staff, agency representatives, and members of SAT's for various project schools. All of these individuals are described in the following section, even though many of them had no direct involvement with School N. The degree of their involvement with School N is presented at the end of this section.

2. Project Central Staff, PDE (Project Director and Internal Evaluator)

a. Director

The project director for PSIP has been hired as an outside PDE consultant for the duration of the project and has served as the only project director. Previous experiences include: six years as an industrial arts teacher, five years as assistant director and director of the Pa. Research Coordinating Unit for Vocational Education (PDE), two years as assistant director of the PDE Bureau of Educational Research, and six years as vice president and secretary and director of a private corporation in Pennsylvania dealing with the sale of microfilm products and services. Within these experiences have been several activities relating to project design and coordination. The project director holds a B.S. in Industrial Arts Education, an M.Ed. in Industrial Arts Education, and a D.Ed. in Educational Administration. As has been stated before, the project director was appointed on September 1, 1976 and was not involved in the proposal preparation or the initial project planning activities.

b. Evaluator

The project has had one internal evaluator who has been with the PDE as an educational research associate since 1968. Experience prior to joining PDE includes teaching elementary education for three years. Experiences in PDE as an educational research associate include: project director, testing and evaluation consultant, and test developer on several federal and state funded projects. The project evaluator holds a B.S. and an M.Ed. in Elementary Education and a D.Ed. in Elementary Education/ Educational Psychology. The project evaluator's starting date was October 1, 1976 and he was not directly involved in the project proposal development.

3. Agency Representatives, RISE (Three Persons)

a. One of the RISE representatives has served as Director of RISE for the past eight years. Experience prior to RISE included two years as a curriculum development specialist for PDE, and five years as a secondary school teacher of English and humanities. Academic preparation includes a B.S. in English Education/Mathematics, an M.S. in English, and current candidacy for a doctoral degree in educational administration. This individual was involved both in the original project proposal development and active participation with some of the PSIP sites, but not this one.

b. Another RISE representative has been with RISE since 1968 serving as a literature searcher, Director of Information Services, and presently Assistant Director. Prior

to involvement with RISE, she taught elementary school for six years. Academic preparation includes a B.S. and an M.S. in Elementary Education and principalship certification. This individual was not actively involved in the proposal development, but was somewhat involved in early work with the case study site LAT.

c. The third RISE representative has been on the staff as a technical assistance linking agent since January 1977. Prior to work with RISE, he was a teacher for five and a half years, the last one and a half years as head teacher. This individual holds a bachelor's degree in elementary education and a master's degree in elementary education administration. He was the primary RISE representative for IU-B project activities.

4. Agency Representatives, RBS (Three Persons)

a. One of the RBS representatives was actively involved in the original proposal development. This individual has been with RBS for the past seven years serving as Director of Development for Career Education Programs, Director of RBS Technical Programs, Director of Planning in the Field Services Unit, and presently as Coordinator of Field Services. Prior experiences include positions as Director of the Educational Research Unit for the American Institute for Research and Associate in the Evaluation Services Unit of the Educational Testing Service. Academic preparation includes a B.A. in Psychology, an M.A. and a Ph.D. in Measurement and Evaluation. He was actively involved with PSIP for the first year of

the project. Other responsibilities at RBS precluded continuing involvement in the project. This curtailment was attributed to other RBS responsibilities and not to any major dissatisfaction with project processes.

b. Another RBS representative was involved with the PSIP early in its activities, but not from the beginning. Involvement has not been very active throughout the work with the School N LAT. She has been on the staff of RBS since 1970. Positions at RBS have included those of Mathematics Curriculum Coordinator, Coordinator for Mathematics Curriculum Development, and Editor/Writer for the IPI Mathematics Program. Prior to work at RBS, this individual served as a college lecturer in mathematics, a school mathematics specialist, and an elementary school mathematics teacher. Academic preparation includes a B.S. in Secondary Mathematics Education, an M.S. in Mathematics, and a D.Ed. in Mathematics Education.

c. The third RBS representative was the primary person involved with School N. Involvement was not related to "replacing" the original RBS linker in his project functions, but did occur at about the same time. She has been on the RBS staff since 1970. Positions held at RBS include Development Specialist in Career Education Programs, Assistant Curriculum Coordinator for Mathematics, and Curriculum Writer/Editor. Academic preparation includes a B.S. in Early Childhood Education and an M.A. in General Curriculum Development. This individual was not involved in the original proposal development.

5. Agency Representatives, LRDC (Two Persons)

a. One of the agency representatives from LRDC has been a Research Associate at LRDC since 1974. Experiences at LRDC include Director of School Programs in addition to Co-Director of the LRDC efforts in PSIP. He was involved in the original proposal development. Prior to work at LRDC, this linker had experience as: a science teacher (11 years), a guidance director (6 years), a principal (5 years), a director of curriculum and research for a school district (6 years), an assistant superintendent (4 years), and a superintendent (4 years). Academic preparation included: B.S. in Secondary Education, M.Ed. in Secondary Education, and a D.Ed. in Curriculum and Administration. This representative was active in PSIP activities in the other project IU. He had no involvement with School N activities.

b. The other representative from LRDC has been with LRDC since 1968 and has served as a Research Assistant, Senior Research Assistant, and is currently a Research Associate. In addition, she is on the faculty of the Curriculum and Supervision Department at the University of Pittsburgh. Prior to joining LRDC, this individual was a high school history teacher and worked on a Ford Foundation Project in Central Pennsylvania. Academic preparation includes an A.B., an M.A. in Political Service and a Ph.D. in Secondary Education. She was involved in the original proposal development effort. This person's involvement with the case study site was entirely indirect. She prepared a report

for School N, but had no face-to-face contact with the LAT. Most of her time was spent developing materials for the PSIP Handbook which was to be used in all of the project sites.

6. Summary of the Primary and Secondary Linker Involvement in the Proposal Development and IU-B Case Study Site

a. Proposal Development

The primary linker at IU-B was not involved in the proposal development although the linker's supervisor was involved. The linker's supervisor had some, but limited, involvement in the actual operation of the project.

At the PDE level, neither staff member was involved in the proposal development. Both were brought into the project after funding from NIE. The major PDE staff member involved in the proposal development resigned shortly after the project was approved. Another person from the PDE - Educational Quality Assessment Division was involved in the proposal development, but when the focus shifted away from EQA, involvement became minimal in terms of actual project activities.

One of the three RISE representatives, one of the three RBS representatives, and both of the LRDC representatives were involved in the original proposal development. Another LRDC staff member was involved in the proposal development but had very little actual involvement in the project because of other LRDC responsibilities.

Thus, of the ten major project SAT agency representatives and the linker, only four had been actively involved

in the original proposal development effort. This did not include the primary linker or the project director. In addition, the major PDE project advocate, the Deputy Commissioner for Basic Education, resigned at about the same time as the project started. The new Deputy Commissioner came in with little knowledge of the project intents or activities.

b. Involvement with IU-B Case Study Site and PSIP Activities

Figure 2 describes the general amount of involvement of the primary linkers and agency representatives by phase of the processes of the project in School N. This involvement includes actual work with the LAT or preparation of materials for their use. It can be seen in Figure 2 that the major proportion of the SAT activity in School N was the result of the involvement of the linker, one agency representative from RBS, and one from RISE. The project director had major involvement at the entry and orientation phases, some of which was his work with the first IU linker. He was also involved in helping the LAT present progress and needs for implementation to the district superintendent in order to obtain funds for implementation in 1979-80. The IU assistant executive director assisted in the early phases, but did not continue involvement with the LAT beyond the first year. Reasons for this will be discussed in later sections. Two RBS staff members assisted the RBS representative in the collection and presentation of needs assessment data. The only involvement of LRDC was a report

Figure 2

INVOLVEMENT WITH SCHOOL "N" PSIP ACTIVITIES

| INDIVIDUAL | Entry 11/76 | Orientation 3/77 | Site Description 3-4/77 | Needs Assessment 4-8/77 | Program Analysis 11/77-6/78 | Problem Identification, 6/78 | Knowledge Consolidation, 4-7/78 | Selection 9-11/78 | Planning for Implementation 11/78-5/79 |
|---|---|---|---|---|---|---|---|---|---|
| Primary Linker-1 | + | M+ | M | M+ | | | | | |
| Primary Linker-2 | | | | | M | M | S | S | M |
| Project Director | M | M | S | | | | | | M |
| Project Evaluator | S | S | S | | S | | | | |
| RISE(a) | S | | | | | | | | |
| RISE(b) | | | | | | | | | |
| RISE(c) | | | S | S | S | S | M | M | S |
| RBS(a) | | | | | | | | | |
| RBS(b) | | | | | | | | | |
| RBS(c) | S | M | M | M* | M | M | S | S | M |
| LRDC(a) | | | | | | | | | |
| LRDC(b) | | | | S | | | | | |

LEGEND

Blank = No involvement
S = Some, but not major, involvement
M = Major involvement
+ = Included asst. exec. director of IU
* = Assistance of other RBS staff for data analysis

prepared in the program analysis phase. Neither LRDC representative had any direct contact with the School N LAT.

The original intent of the project was to have active agency participation in materials development, process design, on-site work, and IU linker training and support during the first two years of the project. Beyond that time, the linkers were expected to be pretty much self-sufficient with SAT agency assistance for specific functions in needs assessment, program analysis, and search for products. Figure 3 presents a description of the level of involvement in general PSIP activities during the 36 months of the project.

## Figure 3

### INVOLVEMENT IN PSIP ACTIVITES
### STAFF AND AGENCY REPRESENTATIVES

INDIVIDUAL

| | | Year 1 | | | | Year 2 | | | | Year 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7/76-9/76 | 10/76-12/76 | 1/77-3/77 | 4/77-6/77 | 7/77-9/77 | 10/77-12/77 | 1/78-3/78 | 4/78-6/78 | 7/78-9/78 | 10/78-12/78 | 1/79-3/79 | 4/79-6/79 |
| Project Director | S | M | M | M | M | M | M | M | M | M | M | M |
| Project Evaluator | | M | M | M | M | M | M | M | M | M | M | M |
| RISE(a) | M | M | M | M | M | M | M | M | S | | S | |
| RISE(b) | | M | M | M | M | M | M | M | S | S | S | |
| RISE(c) | | | S | S | S | S | M | M | M | M | S | S |
| RBS(a) | M | M | M | M | | | | | | | | |
| RBS(b) | | | M | M | M | M | M | M | S | | | |
| RBS(c) | | | S | S | M | M | M | M | M | M | S | S |
| LRDC(a) | M | M | M | M | M | M | M | M | S | S | | |
| LRDC(b) | M | S | S | S | S | S | S | S | | | | |

LEGEND

Blank = No involvement
S = Some, but not major, involvement
M = Major involvement

## II. Key Concepts Used in this Linkage Case Study

This linkage case study describes the linking arrangements developed to work with local school sites in Pennsylvania in the utilization of R&D products in the solution of local problems. It looks specifically at project activities of the linking agencies and primary linker working with an elementary school in Eastern Pennsylvania, where a group of 5 to 8 teachers and the building principal participated in project activities for about 30 months. During that time several agency linkers and the IU linker spent a great deal of time and the project invested a great deal of money working with the participating teachers. This case study describes the activities of the project staff, the two persons who served in the IU linker role, and the local site participants, and makes some inferences relative to the linkage and linker actions affected by and affecting work with the local participants.

This site was one of the first project sites in IU-B. While all of the agency personnel were experienced in working with local sites and had observed PSIP activities in the other project IU, none had been involved in such a concentrated team-effort over such a long period of time. Early efforts to get the project organized and project process materials developed took a great deal of time. Many of the project activities and materials were used by the School N SAT group for the first time with this local group. Thus, there were points when the SAT may have seemed somewhat disorganized. The fact that this was one of the first IU-B groups precluded the SAT personnel from being aware of some of the contingencies that could arise and the consequences of various project strategies.

This linkage case study presents an interpretation of factors that relate to the inter-agency linkages and linker behaviors affecting and being affected by happenings at School N. In general, this linkage case study will discuss the following major topics:

A. At the Project Level:

1. The expertise of SAT agency representatives was used to develop a very detailed, comprehensive set of procedures to be used in local school change efforts.
2. The expansion of IU linkage structures into other than the two original project IU's.
3. The exceptional nature of project information dissemination to other professional audiences.
4. The projected use of the process in one of the original IU's and several of the other IU's in the state.
5. The development of inter-agency linkages between the four primary agencies (PDE, LRDC, RBS, and RISE) which can serve other functions in the future.
6. Projected institutionalization of the PSIP process and services through PDE.

B. At the Linker Level:

1. Both linkers had some initial adjustment problems.
2. There was personal and professional conflict between the project director, the project evaluator and linker-1.
3. SAT agency representatives working with linker-1 felt she was not organized and was not following project procedures.
4. Linker-1 and the IU assistant executive director felt IU-B and linker-1 were being unfairly compared to IU-A and the IU-A linker.

5. Statements made by the project evaluator on monthly reports and in staff meetings gave linker-1 the impression that PSIP staff were "out to get her" and force her to resign.

6. Personal and professional pressures on linker-1 were significant factors in her decision to resign.

7. Linker-2 entered the project when School N had already been involved on an active basis for about 6 months.

8. Linker-2 and one of the agency representatives had professional disagreements, some of which affected, although not greatly, work with School N.

9. Work of linker-2 was viewed as very helpful throughout the School N activities.

C. At the School N Level:

1. The selection of the LAT was based on a desire to have a representative group.

2. There was some internal conflict within the LAT.

3. The LAT was a highly trained group, not suffering from feelings of quasi-professionalism.

4. The LAT became very frustrated with SAT insistance that they follow the current and desired student performance documentation procedures. School N's non-graded instructional program did not fit the categories. They felt a lot of time was wasted.

5. The LAT coordinator continually pressured the SAT for more specific answers based on research in the field.

6. The principal became an active participant in the process and at times sought short-cuts to speed up the activities. His involvement was a significant and positive one.

7. There was a change in LAT composition, resulting from some members leaving the district, which decreased internal LAT conflict.

8. There was concern that the problem identified might be too general for the RISE representative to use in searching for products.

9. There was concern that the product selected might not be useful in dealing with the language-related problems the staff was facing.

10. Two products were selected from the potential products presented by the RISE representative.

11. The products selected tended to be more a result of some personal interests rather than specific selection criteria.

12. The active involvement of the LAT in School N was about 27 months. The LAT felt this was too long a period to get to the pre-implementation point.

13. School N's LAT coordinator and principal have been generally satisfied with the work of the linkers and SAT representatives.

14. The principal and LAT coordinator are seeking support from the district for implementation activities. It does not look as though resources for complete implementation will be available.

These happenings will be discussed in terms of linkage factors in the next section (III) of this linkage case study. Section IV presents a discussion of forces affecting inter-agency linkage and linker development and operation found in the literature. These are

used as a basis for analysis of PSIP linkages and linkers in IU-B. Section V presents implications and recommendations in areas of policy, management, and research needs relative to inter-agency linkage structures and procedures as support mechanisms for local educational change.

## III. Project and Site Happenings

This section presents the happenings of the PSIP at project and site levels. These happenings are organized into nine categories:

(1) Pre-School N entry, July 1976-September 1976

(2) School N entry and orientation, October 1976-March 1977

(3) School N problem identification-needs assessment, April 1977-August 1977

(4) Change of IU linker, September 1977-October 1977

(5) School N problem identification-program analysis, November 1977-June 1978

(6) School N search and selection, July 1978-November 1978

(7) School N planning for implementation, December 1978-May 1979

(8) Residues at School N level

(9) Overall PSIP institutionalization

Within each of these areas, with minor exceptions, the linkages with the sites (School N), linker-host agency relations, and inter-agency linkages will be discussed. The concentration in this section is on linkage analysis of overall project level happenings, overall project happenings specifically affecting IU-B and School N, and specific happenings in School N. For more detail in specific site level happenings see the Site Case Study written by L. Peters.

### A. Pre-Site Entry, July 1976-September 1976

#### 1. Happenings

Figure 4 presents the major project happenings prior to entry of School N into the PSIP process. Most of the project activities during this period were start-up and organizational in nature. Early planning efforts were the responsibility of the primary agency representatives from LRDC, RBS, and

Figure 4

PSIP AND SCHOOL"N" (IU-B) CHRONOLOGY OF HAPPENINGS
PRE-SITE ENTRY, JULY 1976--SEPTEMBER 1976

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| July 1976 | Project start-up, Representatives from LRDC, RBS, and RISE plan project activities. | |
| August 1976 | Initiation of activities in IU-A with presentation to interested superintendents and principals. Agency representatives designated. | |
| September 1976 | Project director appointed, continued planning and process materials development (RBS-needs assessment, LRDC and RISE-knowledge consolidation, RISE-search for R&D products in basic skill areas.) IU-B assistant executive director makes plans for involvement of IU-B schools. | |

RISE. Site contact and orientation activities started in IU-A, but not in IU-B. A search was conducted for a project director. The director was hired and started the position on September 1, 1976. While the project director was the choice of the major project agency representatives and the PDE upper level administrators, he did not seem to be the preferred choice of the IU-B assistant executive director. This seemed to be a factor in some of the project staff and IU-B interactions later in the project when there was PSIP staff (primarily the director and evaluator) conflict with the IU assistant executive director over the performance of linker-1. LRDC, RBS, and RISE personnel prepared an orientation presentation package for use in recruiting school districts to participate. General agency responsibilities were determined.

2. Linkage Analysis

a. Linker-School N Relations

Since School N had not entered, nor had the linker been hired, this category is not applicable.

b. Linker-Host Agency Relations

Again, this is not applicable.

c. Inter-Agency Relations

Inter-agency relations during this period were very positive. Agency representatives spent a great deal of time together planning for project operations and responsibilities, and were optimistic about the potential for the project to assist local school districts conduct a very systematic process leading to implementation of

an R&D product or products to meet an identified need in basic skills areas. There were three minor inter-agency concerns, but these did not have any significant effect on project operations during this period. They were: a concern on the part of RBS that an LRDC staff member who had worked on the original proposal was not assigned by LRDC to work on the project, a concern that some of the orientation presentation activities were not clear to school staff in IU-A, and the previously mentioned concern of the IU-B assistant executive director regarding the selection of the project director. Overall relations, however, were very positive and cooperative.

B. School N Entry and Orientation, October 1976-March 1977

1. Happenings

Figure 5 presents a chronology of major project and site happenings during this six-month period covering entry of School N and the IU-B schools, organization of the LAT, orientation of the School N staff and LAT, hiring of linker-1, and collection of data for the district profile and "pulse visit." Project level activities concentrated on development of materials to use with LAT groups and getting SAT agency working groups assigned for PSIP schools. The project director and the evaluator spent a great deal of time working with linker-1. Some project staff, especially the evaluator, had become somewhat enchanted with the work of the linker in IU-A. Pressure was being put on linker-1 to do things the way the linker in IU-A was doing them. It was recognized that the SAT was not presenting a "productive group approach" in IU-B.

Figure 5

PSIP AND SCHOOL "N" (IU-B) CHRONOLOGY OF HAPPENINGS
SCHOOL "N" ENTRY AND ORIENTATION, OCTOBER 1976--MARCH 1977

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| October 1976 | Project evaluator appointed, continued planning and process materials development. Planning for initiation of IU-B entry. Contacts with other PDE programs for possible involvement. Agreement that LRDC to be responsible for SAT activities in IU-A and RBS to be responsible in IU-B, based on physical distance proximity. | School N district superintendent receives information on PSIP from IU-B assistant executive director, indicates interest, suggests School N as a good urban site. School N principal and superintendent attend PSIP orientation session, both indicate interest. |
| November 1976 | PSIP team meeting, needs assessment procedures approved; plans for evaluation, reporting, knowledge consolidation discussed. Pulse visit process and questions developed. IU-B assistant executive director and other SAT members make presentation to IU-B superintendents and principals. | School N principal, guidance counselor, and resource teacher (who became LAT coordinator) attend PSIP orientation session, decide to participate. |
| December 1976 | Meeting of RBS, LRDC, and director to coordinate needs assessment and program analysis procedures, some conflict as to roles and production schedules, RBS feels LRDC not being responsive. RISE completes development of initial list of possible products in basic skills area of reading/language arts. Article in PDE Education magazine, further contacts with other PDE projects, | School N principal and resource teacher discussed the project informally with School N teachers. |

Figure 5 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| December 1976 (continued) | PSIP brochure designed, report made to PDE commissioner for basic education. NIE-RDUP evaluators' meeting held. IU-B linker-1 hired, Project director provides orientation and initial training for linker-1. | |
| January 1977 | PSIP team meeting for orientation to needs assessment procedures and some discussion of program analysis variables and measures. IU-B activities start, but not in School N. RISE met with LRDC and IU representatives to coordinate selection with knowledge consolidation procedures, continues search for products in basic skill area of mathematics. RBS and LRDC make commitment to help RISE procure products. Project director continued training work with linker-1. Linker-1 gets involved with IU sites, for School N this is in form of discussions with LAT coordinator and others for preparation of a School N profile. Project director appointed to planning group for 1977 Dissemination Conference. RISE hired a representative to work with the IU-B SAT. | Discussions of linker-1 and School N personnel for purpose of school profile development. |
| February 1977 | RBS and LRDC continue to integrate needs assessment and program analysis procedures. Project director | Continued development by linker-1 of the School N profile. Linker-1 worked with School N principal and |

Figure 5 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| February 1977 (continued) | met with PDE special assistant for IU's to inform and discuss future involvement of other IU's. Project director feels linker-1 overloaded with activities and assignments. Project evaluator holds meeting with linkers from two project IU's to go over evaluation needs and procedures. Project director assists linker-1 in IU-B activities. Linker-1 feels pressure to do things the way they were done in IU-A. | resource teacher in designation of LAT group. LAT is formed, includes eight teachers, principal to be an adjunct member, principal selects resource teacher as LAT coordinator. LAT composition based on getting balance or representativeness of skill level and content areas. |
| March 1977 | RBS and LRDC presented instruments for program analysis to PSIP team. RISE and RBS continued work on knowledge consolidation and selection materials and procedures. PSIP brochure is distributed. Presentations made to Council on Basic Education of the State Board of Education and the Pa. Council of Organizations for Education. NIE-RDUP directors' meeting held. Meeting of RDUP evaluators and case study writers. It is recognized that the SAT working in IU-B does not present a "productive group approach" in working with LAT's. Orientation session presented to total School N staff. "Pulse visit" in School N. | PSIP orientation presented to School N staff. SAT representatives felt group was "favorable and inquisitive." Linker-1, project director, a representative from RBS, and one from RISE conduct pulse visit to meet staff, get an overall impression of school climate, and collect data on program analysis variables. |

2. Linkage Analysis

a. Linker-School N Relations

Relations of linker-1 and the School N LAT were good. Linker-1 was still in the process of learning the PSIP concepts and operations and understanding of SAT agency responsibilities. The SAT working with School N at times did not seem very organized and were not working as a team. The RISE representative had been recently (January 1977) hired and the RBS representative had observed several sessions in IU-A but activities in IU-B were the first major PSIP activities that she handled pretty much on her own. While there was some strain in the SAT that reduced perceptions of the LAT of the SAT being well-organized, general linker relations with the School N LAT were positive and anticipatory.

b. Linker-Host Agency Relations

This area started as a problem for the IU-B linker and remained as a problem throughout her time on the project. The major problem was that the linker had great difficulty understanding who the host agency was for her. She had been hired by the IU and worked closely with the IU assistant executive director and thus felt the IU was the host agency. The assistant executive director worked with the linker a great deal and supported her work. However, since she was a new employee of the IU, specifically hired for the project, her attachment to the IU as the host agency created problems for her in dealing with PSIP staff and agency representatives. The PSIP staff tended

to desire loyalty to the project above the IU. In IU-A, this had happened and was one reason the IU-A linker was viewed as being more productive to the PSIP staff than the IU-B linker. Thus, the linker in IU-B had difficulty knowing to whom she was accountable. When problems arose, she was put in the middle. The fact that the IU assistant executive director felt he was responsible for PSIP activities in IU-B was in conflict with the feelings of the PSIP-PDE staff. SAT agency representatives tended to have more loyalty to the project than the IU which further complicated the problem for linker-1. As problems became more severe, the linker would move more toward the IU for support, having a multiplying effect on strain between the PSIP staff and the linker. It tended to be a cyclical pattern. The more conflict there was between the linker and the PSIP staff, the more likely it was that the conflict or uncertainty would increase. Ultimately, this could be a significant factor in the linker's decision to resign.

c. Inter-Agency Relations

During this period, there were generally good inter-agency relations. The project director was developing other contacts within PDE for sharing project activities and involving other PDE project personnel in PSIP planning. The project director was beginning to lay the ground-work for institutionalization of the PSIP operations in future PDE operations. Agency representatives were making good progress in developing materials for use

with sites, several of which were of a cooperative nature between agencies. One conflict arose between LRDC and RBS in development of program analysis materials. RBS felt LRDC was not meeting schedules for getting the work done. In attempting to solve this problem, several meetings were held by the project director and a modification in RBS duties to allow them to do some of the program analysis work resulted. Eventually, the work was completed and approved by the PSIP staff and agency representatives, but the relationship between LRDC and RBS representatives had been temporarily strained.

C. School N. Problem Identification-Needs Assessment, April 1977-August 1977

1. Happenings

Figure 6 presents the major project and School N happenings during the School N needs assessment phase.

a. School N

Needs assessment activities in School N included the development of current and desired student performance charts and the use of these charts for determining performance discrepancies. During this period, there was some internal conflict within the LAT. Two of the LAT members tended to challenge the LAT coordinator in LAT and other school procedures. The principal was not an active member of the LAT during this period. Had he been, it is likely that there would have been less internal conflict. The LAT demonstrated that it was a group not suffering with what Seiber (5,128) has termed "quasi-

Figure 6

PSIP AND SCHOOL "N" (IU-B) CHRONOLOGY OF HAPPENINGS
PROBLEM IDENTIFICATION--NEEDS ASSESSMENT, APRIL 1977--AUGUST 1977

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| April 1977 | Knowledge consolidation development continued. PSIP presentations made at AERA and Pa. Federal Program Coordinators Conference. Discussions held with a different IU about getting involved in PSIP-type activities. Project director continued effort to get IU-B SAT and linker-1 to communicate and cooperate more. Project director indicated a need for more involvement with IU-B linker and assistant executive director in training activities; Plans were made for linker-1 to observe and work with the linker in IU-A and for the project to provide consultants in reading and math to help linker-1. Relations between linker-1 and the project evaluator became strained, evaluator felt linker-1 had not internalized the PSIP process and would require a step-by-step checklist to follow. Conflict included IU-B assistant executive director who was support-linker-1. First two LAT/SAT meetings were held with School N. Project evaluator visited the school to interview four non-LAT teachers. | The first LAT/SAT meeting was held with School N. PSIP personnel conducting the meeting included linker-1, the IU asst. exec. dir., and agency representatives from RBS and RISE. The session included presentation of PSIP objectives, presentation of pulse visit data, and introduction to needs assessment. The LAT seemed to agree with the results of the pulse visit. A RUPS exercise was used to get the LAT to discuss problems in preparation for needs assessment. The second LAT/SAT session (four days later) was conducted by linker-1 and the RBS representative. Its purpose was to develop a needs statement, which was: "EQA (Educational Quality Assessment, Pa. state testing program) results, standardized test scores, and observed performance show that most students are functioning below grade level in reading, we need to reexamine our present methods of instruction to determine a means of improving the effectiveness of our present program, and we need to improve student performance within the non-transient population, as measured by a test yet to be specified." |

Figure 6 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| May 1977 | PSIP team meeting to discuss progress in materials and procedures development in needs assessment (RBS), knowledge consolidation (LRDC and RISE), selection (RISE), and implementation (RBS). The need for a linker handbook was discussed. A report by the project evaluator included comments that irritated the IU-B asst. exec. dir. and linker-1. The IU-B asst. exec. dir. reported that he was conducting an evaluation of linker and SAT activities in the four IU-B schools. The project director indicated that discussions were being held with two other IU's who were interested in the PSIP process. The project director developed a plan of action for linker-1's activities and initiated a new training process for linker-1. Linker-1 participated in PSIP sessions conducted by the linker in IU-A. PSIP presentations were made at the Pa. Educ. Res. Assn. and PDE Office of Planning and Evaluation Conferences. | The second needs assessment was conducted with the School N LAT. It was conducted by linker-1 and the RBS representative. Purpose of the session was to develop desired student performance charts in reading. After some concern on the part of the LAT that they could not use the project-designed framework based on grade level because School N used a non-graded group structure, the LAT agreed to try to work with the PSIP charts. About midway in the afternoon the linker and RBS representative left the LAT to continue work on the charts. Frustration of the LAT in doing this ensued and they left the meeting somewhat irritated because they felt forced to use the PSIP structure rather than their own scope and sequence charts. This was communicated to linker-1 the next day when she called to check on progress. The School N principal, LAT coordinator, and all of the teachers on the LAT responded to a form with three open-ended questions requesting feelings about the PSIP program, the linker, and the SAT agencies. This form was developed and sent by the IU asst. exec. dir. Responses were general feelings that the PSIP process was valuable, that the linker was doing a good job, and a need for more specific direction and guidance from the RBS and RISE representatives. Concern was expressed about the model not "fitting" School N's structure. Another comment was made about "bad vibes" within the LAT |

Figure 6 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| June 1977 | Modification of needs assessment procedures after first year's experience (RBS). Continuation of development of knowledge consolidation through intrinsic analysis of curriculum (LRDC), preparation of selection section for linker handbook (RISE), and planning for implemenation activities (RBS and RISE). PSIP presentation made to Urban State Conference. Meeting of NIE-RDUP directors and evaluators. Two IU's to start projects using linker-type strategy, intend to tie into some PSIP activities. Development of plans and materials for linker training. The project director and the asst. exec. dir. met to discuss the situation in IU-B. Results of the survey conducted by the asst. exec. dir. were discussed. Plans were made for continued work with linker-1 and the hiring, by the IU, of a person to assist the linker in clerical and routine duties. It was the impression of the project director that the asst. exec. dir. agreed to cut down on his direct involvement in PSIP activities. The asst. exec. dir. responded to the project director that he felt the was the ultimate supervisor of the linker and, as such, he intended to "work as closely as possible with the participating agencies." | Linker-1 maintained contact with LAT coordinator. |

Figure 6 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| July 1977 | Major work on development of linker handbook to include modules in needs assessment, knowledge consolidation, selection, and implementation. Plans made for review and revision of handbook, RBS to be responsible for preparation of overall document using input of other SAT agencies. Intrinsic analysis of curriculum paper prepared (LRDC). Project director and PDE special assistant for IU's met with RBS staff to discuss use of PSIP model in RBS five-year plan. Project director and evaluator attend an evaluators' workshop. Project director contacts NWRL, RBS, and NDN about linker training programs. Evaluator reports "better rapport" and "improved communication" with linker-1. | Linker-1 met with the School N LAT to revise desired student performance charts. The LAT tended to get side-tracked into measurement methodology issues rather than performance standards. The linker got the LAT back into thinking of the development of the charts as a resource for determining the detailed student needs statement. Another session was held the next day. The linker assisted the LAT in the preparation of current student performance charts. A third meeting was held the next day to determine discrepancies between desired and current student performance as a preliminary step to the development of the detailed student needs statement. The RISE representative attended this session to get preliminary information needed for the search process. |
| August 1977 | PSIP staff representatives meet to review and discuss needs for revision in preparation for total PSIP team meeting. PSIP presentation at PDE Curriculum Conference. Director continues planning for formal linker training sessions. Continued work with other interested IU's. Evaluator prepares Year one evaluation summary. Three NIE staff visit IU-B, discussions with linker, SAT, and IU-B. asst. exec. dir., observe sessions in | LAT/SAT meeting was held for the purpose of reviewing the detailed student needs statement. A single broad goal was stated: "the resolution of the causes of reading difficulties." Concern was expressed by the LAT about the next steps. They seemed ready for selection, but the linker and RISE representative indicated that there was still the need for program analysis. This was to be the last meeting at School N conducted by linker 1. |

Figure 6 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| August 1977 (continued) | an IU-B school, but not School N. General impressions of NIE personnel are favorable. Monthly report indicates possible resignation of linker-1, personal reasons cited. | |

professional." Thus, some of the PSIP strategies were not valued as being beneficial and were viewed as too time consuming. While they thought the attempts to develop LAT communication skills were nice, they wanted to get on with selecting a product. At the end of needs assessment, they were not happy with the project proposed activities for program analysis prior to selection activities. Relations between the linker and the LAT were generally good as were relations between the agency representatives and the LAT. However, the linker and SAT agency representatives were viewed by the LAT as being somewhat disorganized and not working as a team.

b. PSIP

During this period, which preceded her resignation, linker-1 was feeling a great deal of pressure from several directions. Relations were strained between the linker and the project director and, particularly, the project evaluator. She felt an unfair comparison was being made between her performance and the performance of the linker in IU-A. Both she and the assistant executive director were disturbed about the comparison and became defensive about activities in IU-B. Several rather pointed comments about the linker's performance were made in the evaluator's Monthly Reports sent to agency representatives and NIE. Among these comments were: "The IU's <u>are</u> different. My working relationship with the IU-A linker. . . will not parallel the working experiences I've had in IU-B and I shall plan on adapting my procedures in IU-B." (February

1977, MRP); "All of the PSIP evaluation instruments have the project name at the top; however, at one school the IU-B linker used an IU-B form by mistake. All verbal communications are now backed up with memos." (March 1977, MRP); "When working/communicating with the linker in IU-B, never assume that she has really understood your directions or your meaning. Follow-up on everything with a memo written in nouns and verbs." (April 1977, MRP); "The missing data for IU-B sites is another reminder that verbal communication with the IU-B linker must be supported by written memos and follow-up reminders should also be used." (June 1977, MRP). In July, the project evaluator reported establishing better rapport with linker-1. However, on the August MRP it was mentioned, a month before it happened, the "possible resignation of the IU-B linker because of personal reasons."

Major project level activities included further development of materials for use in the sites, dicussions with several PDE departments and projects for material sharing, discussions with other IU's who were interested in project involvement, and extensive project information dissemination to other audiences in Pennsylvania.

2. Linkage Analysis

a. Linker-School N Relations

During the needs assessment phase the linker held several meetings with the School N LAT, some of which did not involve the agency representatives. While there were times the LAT felt the linker was not prepared enough,

they tended to have the same feelings about the agency representatives. The School N LAT felt they were a pretty sophisticated, professional group. Thus, some of the PSIP activities and approaches were not viewed as being beneficial and/or productive. In particular, the LAT felt the PSIP needs assessment current and desired student performance charts were not applicable in their non-graded classroom structure. Thus, on one hand, the linker was being pressured by the LAT to modify the charts to fit the program while, at the same time, being pressured by the PSIP staff and agency representatives to follow, to the letter, the project-determined procedures. Thus, a great deal of unproductive time was spent by the LAT, creating frustration and misunderstandings. The lack of obvious SAT-linker cohesion helped allow this situation to occur.

Because of the conflict between the project staff and the linker, the IU assistant executive director conducted a survey of IU-B school sites requesting feelings about the PSIP program, the linker, and the SAT agencies. The nine LAT members, including the principal, responded to the survey. In this writer's opinion, one LAT member had very positive feelings toward the linker, six had positive feelings, and two made no comment about the linker. The only area of improvement was indicated to be a need for more clarity of presentation. A need for more direction from the SAT representatives was mentioned by the LAT. In addition, a letter of support for the project and

linker was submitted by the superintendent. Thus, linker relations with the School N staff were viewed as positive, but some needs for improvement were cited.

It had been recognized that the key to dealing with the School N LAT was in getting the support for the process from the LAT coordinator. In the early stages, this was not easy. The LAT coordinator tended to push for more process rationale from the linker and SAT representatives and did not feel she got it. The LAT coordinator felt the linker was trying to do a good job, but was having a difficult time getting things across to the LAT. The linker maintained close contact with the LAT coordinator, including calling her the day after LAT/SAT sessions to assess feelings about the sessions. By the end of needs assessment, the LAT coordinator was tending to be more of a supporter, but not completely, of the project activities. There was still, however, a feeling of frustration over the length of time it was taking to conduct process activities and the inflexibility of the needs assessment materials use in their situation. The LAT coordinator felt linker-1 tried to mediate between the LAT and SAT agency representatives, but she was not "sure if someone was not playing both ends against the middle."

b. Linker-Host Agency Relations

Relative to the linker, relations with the IU host agency remained very strong. One of the reasons the IU assistant executive director conducted the survey to participating schools was to somewhat combat the "bad

press" linker-1 was getting. While the assistant executive director felt there were certainly areas in which linker-1 could improve, he felt she was doing an adequate job in a difficult situation.

If the project is also considered a host agency for linker-1, relations were not good. The project director and evaluator spent a great deal of time "training" linker-1, but there were some serious personal conflicts that reduced the receptibity of linker-1 for the training. In addition, the comments made by the evaluator on the monthly project reports added fuel to the fire. Toward the end of August, the situation was becoming explosive. The event of linker-1's resignation and this writer's interpretation of the factors leading up to this event are discussed in detail in the next time period presented in this linkage case study.

c. Inter-Agency Relations

Inter-agency relations tended to remain conducive to project opeations. A great deal of work was being done on preparation of process materials for the linker handbook. Materials were being reviewed by SAT agency representatives and field tested in IU-A primarily. There was relative satisfaction that all agencies were making contributions. There was some concern that LRDC representatives were not being as productive as expected, but these feelings did not have a disruptive effect on the project. Some shifts in responsibility had been made to account for this situation. In terms of work with the two IU's,

there was virtually no involvement of LRDC in site activities in IU-B. One of the two LRDC representatives was spending about all of his time working with the linker in IU-A. The other LRDC representative was spending most of her time preparing materials for program analysis. The lack of LRDC involvement in IU-B activities was a point of strain between the IU-B linker / assistant executive director and the project staff.

Major efforts of the project director, in addition to project agency work and planning for year 2 activities, were discussions with PDE staff and projects, major efforts in expanding project activities in other IU's, and planning for formal linker training programs. Significant inroads were being made with other PDE projects and IU's, which in combination with other activities were to help in the institutionalization of the project in the state educational services structure.

D. Change of IU-B Linker, September 1977-October 1977

Figure 7 presents the happenings at project and site levels during this two-month period. During this two-month period, the major event was the resignation of linker-1 and the replacement of her with linker-2. Relative to School N, little activity took place during this time A teachers' strike delayed the start of school and created an atmosphere which was not conducive to PSIP activities. If a strike was inevitable, this was the best time for it to occur to result in minimal disruption of the process.

The situation of the linker's resignation is, in the opinion of this writer, the interaction of a complex set of forces and

Figure 7

PSIP AND SCHOOL "N" (IU-B) CHRONOLOGY OF HAPPENINGS
IU-B LINKER CHANGE, SEPTEMBER 1977--OCTOBER 1977

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| September 1977 | PSIP staff meeting held; Handbook was received and plans for further refinement were made, staff from PDE and other IU's attended meeting, Plans for the second year were discussed in areas of management activities, evaluation activities, linker training, and greater involvement with other IU's and other PDE projects. The project evaluator presented a summary of year one evaluation. Report stirred controversy about comparisons between IU-A and IU-B and between the linker in IU-A and linker-1 from IU-B. IU-B asst. exec. dir. and linker-1 request changes in interpretation of year one results. There is some support for changes from other agency representatives. Evaluator states that: "as the evaluator, she would not change this end-of-the-year summary." IU-B asst. exec. dir. sends letter to IU-B executive director suggesting changes in evaluation summary. No changes are made, but asst. exec. dir. given the opportunity to submit comments to be attached to report. Linker-1 resigns about midway through month. IU-B hires new linker. | Strike delays the start of school for eight days. No major PSIP activity during month in School N. |

Figure 7 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| October 1977 | Project director and evaluator met with linker-2 to provide orientation, review of PSIP process, management and evaluation needs, personnel and roles of SAT agency representatives, and status of IU-B schools. Meeting is held for planning activities in IU-B, includes director, evaluator, two RISE representatives, one RBS representative, and the IU-B project associate (assistant to the linker). Director and evaluator feel linker-2 is learning PSIP very quickly and well. SAT agencies continued work on handbook revisions. PDE news release highlights PSIP activities. Director planned for NIE site visit and formal linker training. NIE-PSIP project coordinator visited IU-A. | Linker-2 introduced to School N principal and LAT coordinator. No LAT/SAT activity during month in School N. LAT coordinator submits English reading materials to LRDC for intrinsic analysis. |

events. While most project staff and agency representatives attribute the linker's problems and subsequent resignation to her actions and inability to understand and carry out the project processes, this writer feels there was much more involved. Some of these factors have been discussed earlier in this case study, but it seems important to attempt to look at the total picture, at least the one this writer has been able to put together.

Linker-1 was hired specifically for work in the project in IU-B. She had not worked for IU-B previously. Thus, she was subject to linker-host marginality effects at the start of the project. Her loyalty was to the IU and assistant executive director. Directions and requests from the PSIP staff sometimes were counter to what she was getting from the assistant executive director. It has been pointed out previously that there were some disagreements on project operations between the project staff and the assistant executive director. One of these conflicts related to the role of the linker. The assistant executive director felt the linker should demonstrate independence more than the project seemed willing to tolerate. He felt the linker should be the major process facilitator and rely on SAT agency representatives for specific technical functions. While there is some question as to linker-1's ability to effectively operate in this fashion, it must be recognized that this was an expectation from her host agency. Thus, linker-1 had difficulty deciding which group was her host agency. From the project viewpoint, she seemed to choose the wrong one. In contrast, one of the reasons the linker in IU-A was viewed with favor is that, even though he was on the IU-A staff, his host agency was clearly the project, not the IU.

Linker-1 was not hired until December 1976, about six months after the start of the project. Pressure was on to get IU-B operational. Linker-1 felt she had little time to get a good orientation to the project. She was listening to a lot of different people with somewhat different perspectives and felt it was "too much, too fast, too soon." Project activities had been going on in IU-A for about four months and some project staff were enchanted (This writer has tried to find a more appropriate word, but feels this is accurate.) with the linker in IU-A. There was a natural tendency to think that linker-1 could learn from the linker in IU-A and model procedures in IU-B. In several situations, linker-1 was told how things were done in IU-A. Neither the linker nor the IU assistant executive director was very receptive to this approach and continued to fight the comparison of the linkers or IU's. While they felt some such exchange would be and was beneficial, they felt there were too many differences to permit some of the comparisons that had been and were to be made. This tendency toward comparison was the factor that ultimately resulted in the resignation of the linker. It will be discussed later in this section.

The linker and SAT agency representatives working in IU-B did not have a very good relationship. SAT agency representatives felt the linker was not organized, was not knowledgeable about the process, made promises to the LAT's that could not be met, tried to be too independent of the SAT, was not really interested in the project, and did not keep the SAT agency representatives informed. The linker felt the SAT agency representatives did not communicate with her, were not providing the direction needed by

the LAT's, and that some of the agency representatives were too inexperienced to work with the LAT's. Whether these charges are true or not, in either direction, the fact remains that the linker and SAT agency representatives did not develop a good working relationship. At times, the relationship seemed to be more positive, but in general it never developed to the extent that supported continued, smooth progress.

The project director attempted to provide training for linker-1, but it did not seem to help the situation. In addition, the project evaluator held sessions with linker-1. Some personality conflicts developed. The IU-B assistant executive director got involved and initiated some meetings with the project director and other PDE staff members. On several monthly reports, the evaluator made entries concerning the linker. While the evaluator may have been justified in her dissatisfaction with the work of linker-1, it is this writer's opinion that the medium and tone were not appropriate for airing this dissatisfaction.

Thus, by the end of August, the linker was considering quitting not for personal, but for professional reasons, although the public reason given was "to get married." She had become somewhat paranoid. She indicated to this writer that she felt close to filing legal suit and was worried that the project would damage her career.

The IU-B assistant executive director and linker-1 had been fighting comparison of IU-A and IU-B for several months. Their argument seemed somewhat justified. IU-A had an earlier start in project activities. The IU-A linker had been on the staff of the IU and worked in the area for several years, so he knew the

territory, while linker-1 was new to the IU and the area. The IU-A linker had a few months to prepare for major project initiation, while linker-1 did not start until after the orientation session to district superintendents. Since IU-A was a field test of the process, the level of professional SAT assistance was higher in IU-A than in IU-B. Not only did more SAT agency representatives work in IU-A than in IU-B, but the ones working in IU-A tended to be higher level, more experienced agency personnel. IU-B felt it was getting the "second team." Up to June 1977, there had been about 102 SAT person days* working with four active IU-A schools, while there were 48.7 SAT person days* working with four active schools in IU-B. While part of this difference can be attributed to one of the IU-A sites being a field test and somewhat of a training for new agency representatives site, it is this writer's judgment that schools in IU-A had higher SAT agency and PSIP staff representation than schools in IU-B. These factors were rarely accounted for in comparisons between IU-A and IU-B progress or linker performance. Also not considered was the fact that IU-A schools had gone further into the process and would be expected to understand it better.

The final project action that precipitated the resignation of linker-1 was the year one evaluation report prepared by the project evaluator. The report was discussed in the September 1977 PSIP team meeting and caused some controversy and irritation on the part of the linker and assistant executive director from IU-B. They requested a change in some of the evaluator's

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*First Year Evaluation Summary, PSIP, September 1977.

conclusions and had the support of some of the SAT agency representatives, but the evaluator refused to make any changes. While it is not this writer's inclination to provide a critique of the evaluation report, he feels some of the points made by the IU-B assistant executive director were justified.

Shortly after the meeting where the evaluation report was discussed, linker-1 resigned. A combination of many factors and events can be attributed to have created this situation, many of which were beyond the control of linker-1. It is this writer's opinion that almost anyone serving in this role at this time would have been faced with most of the same problems. Linker marginality with the project staff, the SAT representatives, and the school LAT's were too much to try to deal with. Throughout this time, the IU-B assistant executive director was the only influential advocate for linker-1, but his influence was not strong enough to protect the linker.

Linker-2 was hired immediately after linker-1's resignation. It is interesting to note that she had some of the same problems as linker-1, but not the project staff marginality problem. These problems will be discussed in other sections of this linkage case study. Linker-2 was involved in several group and individual sessions for project orientation. She picked up on project activities quickly. The IU-B assistant executive director introduced linker-2 to the LAT coordinators. Since project activities were not to start in School N until November, because of the strike, she was able to get a good understanding of the situation prior to work with the LAT.

## E. Problem Identification-Program Analysis, November 1977-June 1978

### 1. Happenings

Figure 8 presents a chronology of project and site level happenings during the eight-month period covering program analysis in School N. Program analysis involves an indepth examination of variables based on a model developed at LRDC prior to the PSIP project. Program analysis procedures include the following steps. LAT selects variables to be measured; the LAT with the help of the SAT constructs instruments to measure the variables; instruments are administered; RBS analyzes the data and presents a program analysis report to the LAT; LRDC conducts an intrinsic analysis of curriculum materials used in the school; all of the information is used to determine a program needs statement; and program needs are prioritized for use in selection of R&D products.

#### a. School N

The first program analysis session was conducted in November 1977 by the new linker and the RBS representatives. The project evaluator attended this session. This was the first session in School N for linker-2 although she had participated in sessions in other IU-B schools. This session did not go particularly well. Discussion between some LAT members tended to be threatening to the LAT coordinator. There was some pressure from the LAT coordinator for more information on the research basis of the program analysis variables. There were some LAT disagreements about which variables to

Figure 8

PSIP AND SCHOOL "N" (IU-B) CHRONOLOGY OF HAPPENINGS
PROBLEM IDENTIFICATION--PROGRAM ANALYSIS, NOVEMBER 1977--JUNE 1978

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| November 1977 | NIE consultants conducted a project site visit. Three consultants attended a PSIP team meeting, two remained to review the project in IU-A and one travelled to IU-B to review project activities. Selection modules for linker handbook were prepared. Workshops in program planning and implementation were provided for PSIP linkers, a linker-type person from another IU and RISE staff. Project director worked with another PDE project to develop cooperative efforts. Director makes further plans for formal linker training. Director and evaluator pleased with progress of linker-2, but communications between IU-B and project staff relate to continuation of activities in IU-B. | LAT/SAT session for introduction to program analysis. This was first session in School N for linker-2. SAT agency representatives include one from RBS and the project evaluator. Some LAT members expressed lack of understanding of total PSIP process. LAT coordinator and evaluator exchange different views on research focus of the project. LAT coordinator seemed somewhat threatened and defensive. Internal conflict between LAT members is apparent relative to school operations. RBS representative presented list of variables to be used as basis for program analysis data collection. There was some LAT disagreement in selection of variables, concern was expressed about potential failure of dealing with language differences of students and effects of home environmental influences. The LAT did not want to go through long lists of instrument items to select items and methods of data collection. Time was running out for the day's activities and many LAT members became very frustrated. Some members felt the SAT knew what they wanted, but was "playing games." Some felt the SAT should prepare the instruments, but |

Figure 8 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| November 1977 (continued) | | the SAT insisted that the LAT should prepare them. A decision was made for the LAT to work independently on the list of variables and present the list to the LAT coordinator. The RBS representative and linker-2 agreed to prepare prototype instruments using the list of variables from the LAT for LAT review prior to data collection. School N LAT requested more research basis information on array of possible variables. |
| December 1977 | Selection modules for handbook completed, implementation modules being developed. NIE-RDUP Directors meeting held, evaluator attends meeting. PSIP report to PDE Secretary and Commissioner for Basic Education; Discussion of institutionalization of PSIP in PDE operations after NIE funding. Director makes arrangements for formal linker training session to be conducted by NWRL and NDN. Meeting held with RBS to further discuss relationship of PSIP to RBS five-year plan. Plans made for another IU to observe PSIP activities in IU-B. Meeting held with PDE Long Range Planning Coordinator to discuss common interests and needs for planning. IU-B linker-2 made presentation and discussed involvement of other IU's and school districts at Pa. Comprehensive Reading Program Conference. | LAT members submitted lists of potential instrument items. RBS representative and linker-2 put items together into prototype instruments for review of LAT. IU-B coordinator for migrant education has offered assistance in School N program analysis of bilingual education program. |

Figure 8 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| January 1978 | Project director held meetings with PDE programs of competency-based education, long range planning, state testing, curriculum services, Title IV-c, and Title I to determine PSIP relationships and mutual benefits. PSIP status report submitted to director of PDE Planning and Evaluation Bureau. Continued revision of handbook modules. Final plans made for formal linker training session, other than PSIP linkers to be invited. RBS staff added to assist in program analysis data collection and reporting. RISE representatives attend meeting at NDN to search for new R&D product resources. NIE site visit team submitted report on observation made during November site visit. | Prototype instruments submitted to School N LAT for review. LAT coordinator met with the LAT to pass out instruments and discuss need for data collection from students, which had been overlooked. (School N Spanish language materials submitted to LRDC for intrinsic analysis.) LAT requests a different classroom observation form. Linker-2 and RBS representative continued to work on program analysis instruments. |
| February 1978 | Formal linker training session held, presentations made by staff from NWRL, NDN, PSIP director, and PSIP evaluator. NIE-PSIP coordinator attends session. Both PSIP linkers and representatives from other PDE projects and IU's participate in session. PSIP staff revise program analysis instrument and implementation modules. Evaluator assisted in development of PDE proposal for ESEA funds. Presentation made of application of PSIP process to PDE's Comprehensive Reading/Communication Arts Plan. Director | Linker-2 met with School N principal and LAT coordinator to review suggestions for instrument design from LAT. Final instruments determined. Instruments sent to RBS for preparation for use in School N program analysis. Schedule for data collection developed. Linker-2 and RBS representative continued work on plans for program analysis data collection scheduling. |

Figure 8 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| February 1979 (continued) | has meetings with PDE director of Curriculum Services Bureau and director of PDE competency-based education program. Director submitted a reaction report to the NIE site visit team report, he is not pleased with the comments and conclusions of the report. Project evaluator reports on high satisfaction of IU-B linker-2 performance. | |
| March 1978 | Project director participated in two PDE training programs, met with IU curriculum coordinator, met with task force on National Impact Project for Basic Skills, presented PSIP at a mathematics teachers meetings, and discussed the future of PSIP activities with RBS. Director attended RDUP directors' meeting and gave progress report to PDE Commissioner. Project evaluator presented a paper at AERA conference. LRDC representative worked on revision of handbook for review of PSIP team members. | Final program analysis instruments sent to the LAT coordinator. Program analysis data collected through interviews with students, teachers, and administrators, classroom observations, and questionnaires. Data collection was done by linker-2, the assistant to the linker, RBS staff, and the IU-B migrant education coordinator. |
| April 1978 | PSIP team meeting to discuss progress in IU's, present institutionalization plans, review handbook modules and program analysis instruments, and present findings of the use of PSIP procedures and materials in schools. In addition to the project | RBS staff worked on analysis of program analysis data. RISE presented search results for methods of predicting reading level from IQ scores. |

Figure 8 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| April 1978 (continued) | IU's, two other IU's were represented. PSIP presentations were made at a state reading conference and to the PDE Curriculum Services Bureau staff. The evaluator made a presentation at the Pa. Educ. Assn. Conference. The director and evaluator attended a basic skills conference conducted by RBS. | |
| May 1978 | Project director attended Pa. School Administrators Conference, made a presentation to IU curriculum coordinators, made a presentation to staff in two other IU's, met with RBS to discuss RBS plans for future use of PSIP procedures, and discussed plans for institutionalization of PSIP in the PDE structure. Other IU's indicated interest in year 3 participation with PSIP. | RBS completed program analysis report for School N. |
| June 1978 | Meeting held with PDE staff and Commissioner, support for incorporation of PSIP into PDE ongoing services. Continued discussion with interested IU's, two new IU's to participate in year 3. Hosted NIE-RDUP directors' meeting. Continued revision of handbook modules. Evaluator conducts evaluation of PSIP year-2 activities. Concern expressed as to working relationship between linker-2 and RISE representative. Linker-2 feels RISE representative is not | LAT/SAT session (second program analysis session) held. This is first LAT/SAT meeting since November 1977. Program analysis and intrinsic analysis reports are presented to LAT. In addition to linker-2 and the assistant to the linker, other PSIP representatives participate in session including project evaluator, RISE representative, three RBS representatives, and IU-B migrant education coordinator. All nine LAT members attended. The migrant education |

Figure 8 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| June 1978 (continued) | informing her or involving her in plans for selection processes. This is end of second year of project. The second year evaluation report, which would be distributed at a later time, provides information on year two findings. Responses to some items reflect strain between linker-2 and RISE representative, between project director and RISE representatives in terms of communication with RISE and involvement in project decisions, and feeling on part of linker-2 that she has had to do more than her share of the workload. Project linkers indicate that at times the process was too complex to be successful with LAT's. The linkers felt the project management was always supportive, that involvement in PSIP had increased their leadership/administrative expertise, and they increased in their ability to work with LAT's without as much SAT support as had been in the project. Data from the second year evaluation indicates that the level of support provided for School N activities during year two was 59 days of linker and SAT time at a cost of $7,905. These and other report findings are presented in the narrative aspect of this section. | coordinator presented a report of bilingual education in the U.S., linker-2 presented results of the intrinsic analysis of the English and Spanish curricula, and the three RBS representatives presented the results of the program analysis. There was not enough time for the LAT to develop a program needs definition statement. About two weeks later, linker-2 presented a PSIP update to the School N staff. Another LAT/SAT session took place at the end of the month. Linker-2, the representative from RISE, and a representative from RBS conducted the session. Only five of the nine LAT members attended. It was reported that two of the LAT members, the ones most at odds with the LAT coordinator, had resigned from the district to pursue other activities. There was initial concern on the part of the LAT about some evaluation forms they had received; linker-2 had not been aware of the forms. The LAT had not completed a final program needs statement so some time was devoted to doing this. The LAT seemed somewhat irritated and wanted to move on to selection. Linker-2 and the RISE representative were somewhat at a loss to effectively get the LAT back |

Figure 8 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| June 1978 (continued) | | on track. They were able to get the LAT to prioritize the need for and importance of R&D outcomes, but when requested to determine criteria for selection, the LAT again began to balk at completing the activities. The principal became somewhat impatient and tended to force the process of determining selection criteria. Impatience was high for the LAT. At the end of the session, the RISE representative provided descriptions of 13 possible R&D products for review of the LAT. |

select. The LAT, somewhat reluctantly, went through the test of variables and were not able to complete the task. They became frustrated and decided to review the rest of the variables independently and provide feedback to the LAT coordinator which was to be given to the linker and RBS representative who would develop prototype instruments for the LAT to review prior to administration. Some of the disruption in this session may have been the process of testing linker-2 somewhat.

During December, the LAT coordinator submitted the list of items to linker-2 which were used to prepare a set of instruments for LAT review. During January, the LAT reviewed the instruments and discussed assessment instruments to give to the students. In February, linker-2 met with the principal and LAT coordinator to go over suggested revisions from the LAT. In March, the instruments were sent to the LAT coordinators. They had been put in final form by RBS staff. Later in March, data were collected using the set of interview schedules, questionnaires, and classroom observations. In April and May, RBS staff analyzed the data and prepared a program analysis report for School N. An LAT/SAT session was held in June to discuss the results of the program analysis. Intrinsic analysis reports prepared by LRDC were also presented. A second LAT/SAT session was held later in June to prepare a program needs statement. This session tended to raise LAT member frustration. The principal tended to force the process of determining priorities and

criteria for selection. The RISE representative provided the LAT with descriptions of thirteen products that might be useful in solving the LAT-determined program needs.

b. PSIP

During this period, there were several project level happenings affecting inter-agency linkages and institutionalization of the PSIP program. Several workshops and presentations were conducted by the project director and evaluator. Several other IU's indicated interest in participating in project activities. IU representatives were included in project meetings, in linker training activities, and in observing the PSIP process in program sites. Major progress was made in the development of the linker handbook. A formal training session was held for PSIP linkers, PDE representatives from other departments and projects, and other than project IU's. Progress was made in increasing the publicity of PDE institutionalization of PSIP.

There was one major event that created some strain at the project level. In November, an NIE consultant team conducted a site visit to both IU's and attended a project team meeting. The site visit report was received by the project director in January 1978. Impressions of the site visit team were that: the project seemed to concentrate more on the development of process materials than the development of linker skills and linkage strategies, there was a need for more LAT-SAT interaction, the SAT tended to not be very flexible in adapting the process

to local conditions, the process was too complex and at times tedious, and more attention should be given to institutionalization plans. The report created a great deal of defensiveness on the part of some of the project team members, especially the project director. The project director felt the report did not adequately reflect the scope and activities of the project. The report created some team member dissention, but not to the point that it affected other project activities.

2. Linkage Analysis

a. Linker-School N Relations

Linker-2 had been placed in an awkward position. She had to develop rapport with the school's LAT very quickly. This tended to be somewhat easier with School N than with the other IU-B schools. The other schools tended to be more favorable to linker-1 than School N. Also, linker-2 had some time because of the strike to get oriented to the project operations before working with School N. She was able to observe LAT/SAT sessions in other schools and found that modeling the behavior of the SAT representatives was the most effective training for her role. In her first session with the School N LAT, there was some testing behavior. She was able, through demonstrating knowledge of the project and good group working skills, to develop rapport with the group fairly rapidly. Her relationship with the LAT during program analysis remained very positive in spite of the LAT's feelings of frustration and reluctance to thoroughly conduct some process

activities. During this period, the principal tended to become more actively involved in the process. His impatience tended to create some problems for the linker and agency representatives because he did not want to spend the time to thoroughly go through the project process steps. The was to continue beyond this period.

b. Linker-Host Agency Relations

Linker-2 had been working in IU-B for several years and was pretty well known by IU-B staff. They felt she had the skills and qualities needed by the new linker. She had the support of the IU assistant executive director. The project director and agency representatives were pleased with the selection of linker-2. Throughout the duration of the project, she has been able to work with the project staff, maintain her relationship with the IU host agency, and work well, with a few exceptions, with the SAT agency representatives. The conflict that had existed between the IU-B assistant executive director and the project staff had mediated, which allowed linker-2 to move into the structure without having to deal with IU-B - PSIP staff conflict that existed before.

c. Inter-Agency Relations

Within the project, most of the inter-agency relations remained good. Most of the activity was done by agencies working on separate aspects of the project with the exception of LAT-SAT site interaction. Relative to School N, most agency effort during this period with the LAT was being done by linker-2 and RBS staff. Two additional RBS

were assigned to work on program analysis data collection and reporting. LRDC provided an intrinsic analysis of curriculum, but this was done completely through mail contact. There had never been, nor would there be, any face-to-face interaction between LRDC and the School N LAT. While this lack of direct contact between LRDC and School N had been somewhat of a strain on inter-agency relations in the past, the agency representatives had pretty much accepted the fact that this was what they would get from LRDC and did not expect more.

There was some strain between linker-2 and a RISE representative. Linker-2 felt that the RISE representative "overstepped his role" in working with some of the IU-B LAT's. This was not a problem so much in working with School N, but the strain was there. Linker-2 felt she was not being adequately informed by the RISE representative as to plans for selection and products that had been identified as being of potential value to the LAT's. The second year evaluation report provided evidence of the strain between RISE and the linker and between RISE and the project director. Items reflecting strain between RISE and linker-2 were: RISE respondents disagreed with the statements "the linker (linker-2) provided an effective communication linkage between the SAT and LAT and "the linker kept the SAT informed about critical events relative to PSIP site activity." Reactions of other agency representatives in these items indicated relative satisfaction with linker-2 on these items. Linker-2 checked

"always" to the statement "I had difficulty maintaining the communication linkage between SAT resources and the LAT." RISE responses relative to the work of the project director were disagreement with the statements: The project director "provided necessary communication process for the participating agencies, involved the agencies in decisions, and provided the support and direction expected of a project director." Responses of other agency representatives were in the agreement range on these items. General attitudes toward the work of the evaluator were positive, although responses from RISE representatives were somewhat less positive. It is of interest to note the same types of comparisons that created PSIP - IU-B strain in the first year evaluation report were absent from the second year evaluation report.

The project director held discussions with the linker, the RISE representative, and the director of RISE in an effort to mediate the problem. While mutual understanding of reasons and actions was not achieved, there was an agreement to have more sharing of information between the linker and the RISE representative. The situation did improve somewhat, but not to the complete satisfaction of all parties.

There were other points made in the evaluation report that reflect project-linker relations, which were, in general, positive. They felt they received good support from the project director and had positive feelings toward the work of both the director and evaluator. The two

linkers had a midpoint score on the scale for the statement "I received clear, complete instructions about the PSIP's expectations for a linker." Thus, one of them agreed and the other disagreed with this statement. The linkers were generally pleased with the project materials and procedures, but they felt the process was sometimes too complex to be successful with LAT's. They felt involvement in PSIP had led to an increase in their leadership/adminsitrative expertise.

The NIE site visit report created some strain on interagency relations. During a team meeting where the report was discussed, there was some strain in relations between project staff and the RISE representatives regarding interpretations of the report. These did not last beyond the time it took for people to have their say and then go on with other business.

During this period, there was a strengthening of interagency relations beyond the original project agencies. Major efforts of the project director were involving more contact with other PDE staff for planning for project institutionalization within the PDE structure. Other IU's had become involved and there were still others that sought involvement for the third year. Major information dissemination activities had helped make the project more visible in the state and, to some extent, beyond the state.

F. Search and Selection, July 1978-November 1978

1. Happenings

Figure 9 presents project and site level happenings during the time period in which School N was in the selection phase of the PSIP process.

a. School N

In the final program analysis session held in June, the RISE representative had distributed descriptions of thirteen R&D products he had searched out in response to the LAT student and program needs statement. During the last session in June, the LAT had developed, somewhat unsystematically, a set of selection criteria. During July, the LAT members were to review the product descriptions individually and give their reactions to the LAT coordinator. A few of the LAT members did this, but the initial screening of products was mostly done by the LAT coordinator and the principal. The list of products under consideration was reduced to seven.

An LAT/SAT session was held in early August. It was conducted by the RISE representative with some assistance from the RBS representative. Linker-2 was not able to attend the session. Five LAT members, including the principal and LAT coordinator, attended the session. The purpose of the session was to narrow the list of products down to about three or four in preparation for a more thorough review. In attempting to determine why the first six products were removed from the original set, the RISE representative opened up a proverbial "can of worms."

Figure 9

PSIP AND SCHOOL "N" (IU-I) CHRONOLOGY OF HAPPENINGS
SEARCH AND SELECTION, JULY 1978--NOVEMBER 1978

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| July 1978 | PSIP representatives continued developing linker handbook materials. PSIP inservice training activity held for linkers and other PDE staff. Reports made to PDE upper-level administrators, discussions of PSIP inclusion in future PDE programs. Discussions with NIE regarding six-month extension. | During July, the LAT was to review the 13 R&D products for possible selection. The procedure used was for the LAT coordinator to call the LAT members for their opinions. However, the reduction of the number of possible R&D products from 13 to 7 was mostly the result of discussions between the principal and LAT coordinator. |
| August 1978 | Continued work on intrinsic and program analysis section of linker handbook. PSIP workshops held at state curriculum conference. Presentation made at National Dissemination Forum. Project staff participated in RDU linkers' conference. RISE representative begins development on Linker Readi-Resource File. Report to PDE Commissioner for distribution to state legislature. New NIE-RDU staff introduced. Uncertainty of NIE six-month extension. Brochure describing PSIP activities in one school distributed to PDE agencies, IU's, and Pa. schools. | LAT/SAT session to continue selection activities. Linker-2 was not present at this session, the assistant to the linker was at the session, but had no active role. Five LAT members were present. SAT included RISE and RBS representatives. The RISE representative reviewed the selection process and indicated that the goal was to narrow the list down to 3 or 4 products and asked the LAT to present rationale for the elimination of six products done by the LAT on their own. This created some problems. The LAT coordinator became defensive about the process used. Some LAT members were saying, "Put this one back in if you have information that we don't have." |

Figure 9 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| August 1978 (continued) | | The discussion tended to be counter-productive. The RISE representative's comment as to the LAT not using the selection criteria that had been determined at the last meeting irritated the LAT. Some LAT members felt discussion of products already eliminated was a waste of time. The remainder of the day was spent reviewing the seven products still being considered. Two of the LAT members seemed to lose interest in the process. After the review of the seven products, the RISE representative presented a formal process for further elimination of products through matching each product with the selection criteria and rate the products. The LAT was not very receptive to this, the principal led the discussion to narrow down the product list. There were several side discussions, some of which were not on task. The process was not very systematic, but the LAT chose four products for more intensive review. The principal and the LAT coordinator essentially made the decision. The RISE representative indicated he would provide more information on the four products. |

Figure 9 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| September 1978 | PSIP team meeting held in IU-B. Three new IU's begin PSIP activities, with modified formal and SAT agency involvement. Review of linker handbook materials by SAT agency representatives and project staff. RBS representatives agree to complete handbook revision and final preparation. PSIP shifted to PDE Bureau of Curriculum Services, viewed as a step toward institutionalization. Six-month extension proposal submitted to NIE. Several meetings held with other PDE projects. | RISE representative makes arrangements to get more information on the four products for LAT review. No active LAT/SAT interaction during this month. |
| October 1978 | NIE-RDUP directors' meeting held. PSIP linkers' meeting held, includes linkers from new IU's. Contract negotiations with NIE for six-month extension. Continued work on linker handbook and PSIP transfer into Bureau of Curriculum Services. PSIP participation in IU curriculum coordinators' meeting. | During October, presentations were made and LAT members attended sessions describing two of the four products. A session of the LAT/SAT was held where the linker, a new assistant to the linker, the RISE representative, and five LAT members heard a presentation on Precision Teaching. The next day, the linker and LAT heard a presentation on Systems Directed Reading. One LAT member attended a training session in Systems Directed Reading at another IU-B school. The LAT coordinator and another LAT member attended a Precision Teaching training session. It seemed, at this point, that the decision to select these two products had already been made by the principal and LAT coordinator. |

Figure 9 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| November 1978 | PSIP presentations were made at several state meetings. Meetings with LRDC and RBS representatives to work on linker handbook. Transfer of PSIP within PDE progressed. Meetings held with Pennsylvania Education Dissemination System staff to discuss relationships with PSIP. Preproposal for fourth and fifth years of PSIP. | LAT/SAT meeting was held to continue selection. Reports on attendance at sessions on Precision Teaching and Systems Directed Reading were provided by LAT members. LAT members reporting were very enthusiastic about the two products. Linker-2, the assistant to the linker, the RISE and RBS representatives made up the SAT. Six LAT members were present. Linker-2 distributed and discussion was held on a set of ground rules for selection, School N's criteria for selection, a prioritized list of product needs, a product working sheet, a set of criteria for ranking, and a ballot. Questions for conference calls to developers of the remaining two products under consideration were constructed. Conference calls were made to developers of Instructional System for Teaching Reading Using Continuous Progress Technology (INSTRUCT) and Intensified Reading Improvement Program (IRIP). Discussions concerning the products were held after the conference calls. The LAT balked at a formal rating process. A voice vote was held resulting in unanimous selection of Precision Teaching and the comprehensive component of Systems Directed Reading. Later in the month, linker-2 and the School N principal met with the district superintendent to report |

Figure 9 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| November 1978 (continued) | | progress, indicate which products were selected and discuss support from the district for implementation. The superintendent was pleased with progress and indicated he would attempt to get support for implementation. He requested the preparation of a proposal for activities and costs for implementation. The LAT coordinator attended a Precision Teaching training session in another school district. |

The LAT coordinator became very defensive about the procedure used to eliminate the first set of six products. Some LAT members tended to become uncertain as to why the products were eliminated and were saying to the RISE representative, "Put it back in if you have more information about the product than we do and think it would be a good product for us." This was not the reason the RISE representative was pushing for this exercise. He indicated that the elimination reasons might help him in understanding the products better for other purposes. While this was mentioned to the LAT, they either did not understand or want to understand the rationale of the RISE representative. Some time was spent discussing the elimination of the six products, but the LAT was not very interested in this activity. They soon became frustrated and some felt they should be spending more time on discussion of the products still under consideration than the ones eliminated. Two of the LAT members dropped out of active group participation and tended to remain that way for the rest of the session. Discussion moved to consideration of the seven remaining products. The formal process proposed by the RISE representative was not well received. A rather informal process, conducted mostly by the principal, resulted in narrowing the list down to four products.

During September, the RISE representative worked on getting more information on the four products for the LAT. Plans were made for LAT members to have contact with product development representatives either face-to-face

or through conference calls. It so happened that representatives of two of the products were conducting sessions in schools close to School N. In October, representatives of two of the products made presentations to the LAT. In addition, representatives of the LAT attended product training sessions for these two products in neighboring schools. At this point, it seemed that the LAT coordinator and principal had already selected these as the R&D products to be used.

In November, the LAT/SAT met to continue selection. Reports were given on the two products reviewed through sessions with product representatives. The reports were enthusiastic. Conference call questions were prepared and calls were made to product representatives of the other two products still being considered. After the calls, all four products were discussed. The LAT did not seem very interested in a formal selection process, so decided to have a voice vote to select final products. This was done, resulting in the unanimous selection of the two products which had been reviewed prior to this session. Plans were made to discuss progress with the superintendent and seek support from the district for implementation.

The linker and School N principal met with the superintendent to present a progress report and discuss implementation support. The superintendent requested a proposal for implementation activities and costs. Later in the month, the LAT coordinator attended a training session for one of the selected products.

b. PSIP

Major product level activities in this period were related primarily to project expansion in other IU's and institutionalization of PSIP within PDE. Three new IU's entered the PSIP. Involvement in these new IU's did not have the level of personnel support that had been in evidence in the original two IU's. Major involvement was organized by the project director; it did not include major SAT agency involvement; the new linkers observed sessions in the two original IU's, when possible, and attended sessions conducted by the project staff. This was the major test of the generalizability of the project materials in a situation with a linker, but no major SAT representative involvement.

The project was transferred within PDE to the Bureau of Curriculum Services. This move tended to provide PSIP greater formalized contact with other PDE projects, the IU's, and local school districts. An extension for six-months additional funding from NIE was approved. Several meetings were held with PDE administrators to further plan for institutionalization.

The project director spent a great deal of time working with the NIE staff in getting approval for the extension and discussing plans for a fourth and fifth year of NIE funding. Changes in NIE-RDUP staff created some concern as to the responsiveness of NIE to PSIP requests and the future of RDUP efforts.

SAT agency representatives continued work on the process materials in the form of the linker handbook. Involvement of LRDC representatives tended to decline. RBS representatives agreed to complete work on the revised linker handbook materials.

2. Linkage Analysis

a. Linker-School N Relations

During this period, linker-2 was able to develop very good rapport and working relationships with the LAT coordinator, the principal, and the other LAT members. The LAT felt the linker was well prepared and was able to deal with the frustrations of the group and keep things pretty much on track without alienating LAT members.

Relations with the RISE representative were pretty good. He was able to provide LAT members other kinds of information of interest through RISE searches. Toward the end of selection, some strain developed because of LAT impatience to complete tasks. They seemed to be more irritated with the process than the RISE representative himself. In general, they were pleased with the outcomes of the search process.

LAT members were somewhat aware of the strain between linker-2 and the RISE representative, but felt it did not have a negative effect on accomplishment of their tasks.

b. Linker-Host Agency Relations

The IU-B assistant executive director was pleased with the work of linker-2. During this period, his involvement

in the project diminished. He had a great deal of confidence in the linker and left things pretty much up to her, although he maintained a close informational contact with the linker.

c. Inter-Agency Relations

Inter-agency relations were generally good during this period. There was a great deal of contact between NIE and the project director. There were several times that the project director was frustrated by the lack of NIE responsiveness and the length of time taken to give approval for the six-month extension.

There was a lesser degree of involvement of SAT agency representatives. Some SAT representatives continued to work on process materials while they and other SAT representatives continued working with LAT's. LRDC representatives tended to have less involvement. Most agency involvement was from two RBS and two RISE representatives. There was only one PSIP team meeting during this five-month period. Communications between the agency representatives continued but not at the level of the first two years. This was a period of putting the system to a test without the level of agency support that had been used to structure project activities. This reduced level of involvement did not have a major disruptive effect on project operations, but did tend to make some SAT agency representatives somewhat uncomfortable. Some felt they were not involved nor consulted enough during this period. Crandall (1,225) has

pointed out that these feelings are typical of linkers or major project participants as their involvement decreases.

Within PDE, PSIP continued to develop relationships with other PDE units. Groundwork for institutionalization of PSIP was being well laid. Other IU's had become involved and information about the project was being disseminated to several audiences, some for the first time and others as a part of the continuous project external information system.

G. Planning for Implementation, December 1978-May 1979

1. Happenings

Figure 10 presents project and site level happenings during the planning for implementation phase of the PSIP process in School N.

a. School N

During December and into January, the LAT coordinator and another LAT member conducted a field test of one of the selected products. They decided to field test the Precision Teaching procedures in the areas of social studies for one group of students and mathematics for another group. The LAT decided to conduct implementation in the area of mathematics with plans for expanding it into the language arts area in the future. They were very pleased with the results, and students enjoyed the activities. In January, the LAT met with the linker, the assistant to the linker, and the two representatives from RBS and RISE. The primary purposes of the session were to compare the selected products with the program needs statement and to plan for

Figure 10

PSIP AND SCHOOL "N" (IU-B) CHRONOLOGY OF HAPPENINGS
PLANNING FOR IMPLEMENTATION, DECEMBER 1978--MAY 1979

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| December 1978 | Continued work on finalizing linker handbook materials. Final transfer of PSIP into PDE Bureau of Curriculum Services. Linker training meeting held at RISE. Final draft of six-month extension submitted to NIE. | The LAT received a bibliography of research resources for Precision Teaching. The LAT coordinator and another LAT member conducted a pilot test of Precision Teaching methods with a group of 28 intermediate students in a class about a year behind in grade level. Students were enthusiastic about the use of the methods. |
| January 1979 | Another IU begins active local site involvement in PSIP process. NIE representatives meet with project, PDE, IU-B staff, and staff in two IU-B schools, one of which was School N. PSIP team meeting held. Second-year Evaluation Summary discussed with PSIP team. Continued work on final draft of linker handbook. Several meetings held with other PDE project representatives. Concern expressed by RISE representatives regarding feeling that they (RISE) were not being kept informed about activities in the IU's. New Governor takes office in Pa., pending change in appointment of Pa. Secretary of Education. Involvement of LRDC as support agency terminated by mutual agreement. | LAT/SAT meeting held to describe the selected products and develop an implementation plan. Seven LAT members were present. Linker-2, the assistant to the linker, and the RISE and RBS representatives conducted the meeting. The LAT reviewed the two selected products in terms of the extent to which they corresponded to the desired product characteristics. The products were reviewed along seven desired outcome statements. The two products were felt to answer completely or partially six of seven desired needs. The seventh was to be addressed by adoption of a new basal reading program in Spanish. The RISE and RBS representatives conducted sessions for implementation planning. |

Figure 10 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| January 1979 (continued) | | The LAT worked with SAT assistance in planning for program timing and budgeting; staff assignments, orientation and training; materials, equipment and facilities; student scheduling and instructional procedures; and program monitoring and evaluation. Activities, dates for completion, and staff responsibilities for each of these were specified. The principal indicated he would prepare a proposal for district support. Two NIE-RDUP staff members talked with district staff when they visited IU-B. They were accompanied by the project director and the PDE Commissioner for Basic Education. The RISE representative approached the LAT coordinator about the possibility of being a Precision Teaching training for Pennsylvania in the future. Funds for a Summer training program in Montana would be provided through RISE. |
| February 1979 | Major PSIP efforts conducted in six IU's. PSIP presentation made by linker-2 to IU-B board of directors. Meetings held with IU curriculum coorindators and two PDE projects. NIE-RDUP director's meeting, linker handbook and R&D product Readi-Resource File presented to other RDUP directors. Director of PDE Bureau of Curriculum Services | The LAT coordinator and two LAT members travelled to another IU to review supplmentary material in Spanish and discuss development of criterion-referenced tests. LAT/SAT session held to work on implementation planning. Linker-2 conducted the session with the assistance of the assistant to the linker, and the RISE and RBS representatives. |

Figure 10 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| February 1979 (continued) | attended RDUP directors' meeting. Evaluator completed handbook modules on evaluation of implementation. Director of RBS appointed Pa. Secretary of Education, his familiarity with and support of PSIP is viewed as providing greater chance of PSIP institutionalization in PDE services. | Seven LAT members were present. A final draft of the implementation proposal was presented, other than district funding sources were discussed, and initial evaluation plans were discussed. |
| March 1979 | Major PSIP activities in five IU's. PSIP presentation made at ASCD conference. PSIP director continued major involvement with two other PDE projects. Project director is concerned about NIE and/or PDE support beyond June 30, 1979. | LAT/SAT session held to plan for evaluation of the implementation and discuss the proposal for district funding support. Six LAT members were present. From PSIP, linker-2, the assistant to the linker, the PSIP project director, the RBS representative, and the RISE representative attended. A wide variety of topics were discussed primarily related to follow-up of conferences and meetings for supplementary materials and criterion-referenced testing, implementation of Precision Teaching, budget and scope concerns, and the discussions with the superintendent. The RBS representative conducted a session on evaluation. Linker-2, the PSIP project director, the School N principal, the district director of elementary education, and the superintendent met to discuss the LAT proposal for district support of implementation. The proposal provided a review of PSIP activities, |

Figure 10 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| March 1979 (continued) | | a rationale for need and use of the two selected products, an estimate of about $29,000 in support that had been provided to the district in PSIP and IU-B resources, and a request for $5,800 in district funds for implementation, in addition to a new staff member to operate a Precision Teaching laboratory. The superintendent indicated that he agreed with the need for implementation and that he would support the request in budget meetings. Linker contacted Precision Teaching to request information on evaluation methods used with product, reported back to LAT coordinator. |
| April 1979 | PSIP activities in six IU's. Faculty from two universities become involved in IU-B activities. Continued development on final linker handbook. Major efforts continued in involvement with the PDE units and projects. Proposal presented to NIE-RDUP staff on no-cost extension. Director expressed concern that delays in approval of no-cost extension would create project management problems. | The LAT coordinator and LAT members continued planning for implementation activities. |
| May 1979 | Major project work in six IU's. Discussions held with PDE administrators regarding future of PSIP | LAT/SAT meeting to continue evaluation planning. Five LAT members worked with linker-2 to develop |

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Figure 10 (continued)

| MONTH/YEAR | MAJOR PROJECT HAPPENINGS | MAJOR SCHOOL "N" HAPPENINGS |
|---|---|---|
| May 1979 (continued) | in PDE structure. Major contacts with other PDE units and projects. | evaluation planning charts. LAT coordinator, principal, and one other LAT member seem to be most involved. Principal tends to take leadership role in activities, again shows impatience with time being taken to complete tasks. Progress report on getting district support for implementation is not completely favorable, new staff position will not be approved. Decision on other support, including inservice during the Summer for School N teachers, has not been decided as of the writing of this linkage case study. LAT members remain optimistic about implementation. The possibility for some support from PSIP exists through an NIE no-cost extension of the PSIP time frame. The LAT coordinator is to attend a Precision Teaching training session in the Summer. In the future, she was to put on Precision Teaching awareness sessions in Pennsylvania. In the district, plans were announced to close two elementary schools and reorganize attendance patterns. School N was to lose part of its biligual program. There was talk of reassigning the principal to another school. It was hypothesized that the project involvement in School N was a factor in the decision to not transfer the principal. |

implementation. Activities for pre-implementation, dates, and staff responsibilities were determined. The principal indicated he would be preparing the proposal for district support of implementation. Because of the interest expressed in one of the products by the LAT coordinator, RISE asked her if she would be interested in becoming a product awareness trainer for the state. The LAT and SAT met again in February to continue planning for implementation, including evaluation of the implementation. In March, the LAT and SAT met to continue planning for implementation. Several reports were given on project-related activities of LAT members. The project director was an active participant in this session. While he forced the LAT to consider contingencies if the full requested financial support from the district was not achieved, some of the LAT members did not really want to discuss some of the issues he and linker-2 were raising. Later that day, the linker, project director, the director of elementary education, and the superintendent met to discuss the proposal and possible district support. The superintendent was supportive of the plans, but made no formal commitment for complete funding. It should be pointed out that this superintendent was not the same one who was involved at the time of School N's entry into the project.

The proposal submitted to the district superintendent requested support for staff inservice training, a new teacher to direct a laboratory to assist in program implementation, and other implementation costs. The amount of

support requested was $5,800 plus the cost of a bilingual teacher to direct the laboratory. Included in the proposal was a description of PSIP activities leading up to planning for implementation, a description of the resources that had been used during the School N involvement with PSIP, and a rationale for implementation of the selected products. The proposal indicated that resources used throughout the PSIP project amounted to $36,438, about $9,000 of which represented efforts by the IU linker and about $20,000 by project agencies.

In May the linker and LAT met to continue planning for evaluation of the implementation. As had been the case in several of the LAT meetings during the past year, the principal tended to push the process. The LAT was able to generate evaluation questions, type of evidence to be used, and standards or comparisons to go along with program descriptions. This is the last LAT/SAT session to be reported in this linkage case study.

The situation in School N regarding implementation was still unclear as of this writing. It had been decided that the district could not support the employment of a new teacher to develop and operate a learning laboratory supporting the use of one of the selected products. Funds for Summer teacher inservice on use of the products had still not been approved by the district administration. The request had been referred to a committee making decisions on the use of inservice funds. At this point, the amount and nature of district funding support has not been

decided. There is a possibility of some additional support from the PSIP project, assuming an extension of the project time period. However, even if there is a project time extension, there is still uncertainty as to the amount and/or nature of support that could be provided by the project. The teachers remain optimistic about receiving support, but it is pretty certain that some implementation will occur regardless of the level of support obtained.

b. PSIP

During this period, significant progress was made in the development and strengthening of new linkages in other than the two original IU's and institutionalization of PSIP in the PDE structure. Active PSIP efforts were taking place in more than twenty schools in six IU's. Many of these efforts had minimal on-site SAT agency involvement and were based on the use of revised PSIP process materials designed by PSIP staff and SAT agency representatives.

Information dissimination about PSIP continued at a high level to professional audiences in and outside of Pennsylvania. The change in the Secretary of Education position to the RBS director was seen as a positive move toward PSIP institutionalization, since the RBS director was familiar with PSIP and had indicated that school improvement was to be a high priority area in his new role. However, there were still points of uncertainty regarding the future of NIE support and actual PDE support of PSIP activities. Several meetings were held with NIE staff and PDE staff to plan for institutionalization.

2. Linkage Analysis

a. Linker-School N Relations

During this last aspect of the reportable events in School N, the linker-LAT relations remained very high. The LAT coordinator reported that she felt linker-2 was very organized, acted very professionally, was task-oriented, and displayed a good sense of humor. She was not as likely to get involved in playing games as had happened with linker-1. Linker-2 was felt to always be available if needed and responded quickly to requests of LAT members. She mediated between the LAT and SAT agency representatives on several occasions. While the principal was pleased with work of the linker, he felt linker-training should include more preparation in analyzing the local situation in terms of staff capabilities, in judging the probability of success in local sites, in understanding the power structure in the district, and in involving board members and parent groups in the process. The principal was not criticizing the work of linker-2 specifically, but projecting what he felt other aspects of linker work should include. The principal felt he was not the LAT leader, although during the last year he had a great deal of involvement. He felt the LAT coordinator was trusted by the LAT members and had the time, since she was not a classroom teacher, to devote to project tasks. He felt this was important and that it would have been difficult for a regular classroom teacher to have provided the time needed.

Both the LAT coordinator and the principal were pleased with the work of the agency representatives. They were satisfied with the products selected as a result of the work of the RISE representative. They were pleased with the process assistance of the RBS representative and with the intrinsic analysis report provided by LRDC, even though they never had any direct contact with an LRDC representative. They were also appreciative of the work of the project director in assistance in seeking support for implementation from the district administration. The principal pointed out, however, that these feelings were in large part due to the success in finding R&D products which were viewed as being potentially useful in the school. He felt that if they had gone through the process and not found products there would have been a great deal of dissatisfaction. Both the LAT coordinator and principal felt the process was too long, somewhat too complex, and that some of the activities were not very productive. The principal stated that "the specificity was deadly." While some would say that the process in and of itself is valuable, the principal felt that the teachers had been through these things before and really were not in need of developing process skills.

b. Linker-Host Agency Relations

Linker-2 was very well accepted in the IU. Several proposals had been written and plans made to involve linker-2 in continuing linkage type activities in the IU. Some of the proposals have used the PSIP design, with some

modifications to speed up the process. Linker-2 has become very much a part of the IU scene and the IU assistant executive director is trying very hard to ensure that her linker skills are used in other IU service areas.

Linker-2 reported that she has a feelings of satisfaction and accomplishment. She enjoyed contact with the sites, was pleased that growth was observable on the part of the LAT members, felt the LAT members gained a broader view of the role of research in education, and observed that there was "spill-over" from LAT members to non-LAT members. She was particularly pleased that no school dropped out of the project while she was the linker. Another interesting observation of the linker was that enthusiasm of LAT members dramatically increased during the selection of products. She felt that this was the point where "ownership" on the part of the LAT really developed.

c. Inter-Agency Relations

This period saw somewhat of a shift from major focus on SAT agency linkage to other linkages. LRDC involvement was terminated at the end of December 1978. RBS and RISE involvement continued, but at a somewhat lesser level than it had been previously. Linkages with new IU's and other PDE units and projects were strengthened in an attempt to increase chances of PDE institutionalization. It was a period of transfer from major agency support services to more of a PSIP-PDE self-sufficient operation. This created some concern on the part of RISE in terms of future involvement. This concern seems to still exist as of this writing.

Relations of PSIP staff and the IU-B linker remained very positive. Linker-2 was well respected and had developed confidence in her work from the PSIP staff, agency representatives, and IU-B staff. There continued to be some strain between linker-2 and a RISE representative, but it seemed clear that linker-2 was pretty much running the show in IU-B and using agency representatives only when she felt the need. This tended to make the RISE staff somewhat insecure. In a sense, RISE was feeling somewhat marginal to major project activities and since they felt their services would be needed in future PSIP activities, they were a little uncomfortable about their level of involvement.

The uncertainty of NIE support beyond June 30, 1979 created management and planning problems for the project director. In addition, the state government financial situation created concern as to state funding of PSIP. However, at this writing, there does seem to be a high possibility of state support for PSIP activities, although the exact nature of these activities has not been determined.

H. Other Residues

1. Site Level

Relative to School N there are several residues in addition to the selection of R&D products. Through project participation, staff in School N developed valuable contacts with NIE staff, PDE staff, IU-B staff, and representatives of RBS and RISE. RISE, in particular, seems to be a linkage with a long-term future through the work of the LAT coordinator being an

awareness trainer for one of the products selected. It does not seem that any linkage has been developed with LRDC. In addition to these linkages or contacts made with project agencies, School N has developed a better relationship with another IU in Pennsylvania which has a strong interest in bilingual education.

The School N staff have the feeling that they have participated in a significant educational activity. It has increased their already existing, feeling of professionalism. A better working relationship among the School N teaching staff has been a result of the project, especially after the resignation, after the first year, of two of the LAT members. The potential for the School N staff to be more effective in dealing with unique problems in their school, through the use of the selected products and other contacts made in the project activities, seems to have increased. The principal reported that project activities had given the LAT members a sophisticated look at educational products and practices.

2. Project Level

Primary residues at the state or project level are observable. Through work on the project, PSIP, PDE, IU, and SAT agency staffs have a greater understanding, respect for and interst in cooperative efforts than existed prior to PSIP. New linkages and stronger existing linkages will help the state meet a goal of school improvement. In addition, process materials have been developed to assist linkers working with local sites in systematizing the school improvement process.

It will be necessary for some group (probably PDE staff) to monitor the use of and need for revision of these materials and another group (probably RISE) to provide information on research-based practices and products.

I. Institutionalization of PSIP

Institutionalization of PSIP was a goal of the project director very early in the project life. It can be seen from the chronologies that the project director spent a great deal of time making contacts with other PDE programs and projects, brining in other IU's, working with one of the R&D agencies to incorporate PSIP-type activities in their future plans, disseminating information about PSIP in state and national meetings, and working closely with upper-level PDE staff to plan for institutionalization.

During the first two years of the project, the project home had been the PDE Division of Planning and Evaluation. At the beginning of the third year, the project home became the Bureau of Curriculum Services. This was perceived by the director to be a move toward institutionalization. During the third year, a new Governor was elected in Pennsylvania. His choice for the state Secretary of Education was the director of RBS, who was familiar with and supportive of the PSIP. Currently, plans are being made for a reorganization of PDE. One of the priority areas of the new Secretary is school improvement. Thus, there is a good chance that PSIP will be incorporated into the reorganization. It is projected that the scope and level of direct site involvement will be modified to reduce the time it takes for a site to complete the process and to reduce involvement of the R&D agencies. It seems

that the political process will decide the future of school improvement in Pennsylvania.

By the end of the third year, PSIP activities had changed from two IU's with eight active schools to six IU's with twenty-one active schools. In the newer entry schools, the activities had been modified to speed up the process and rely less on the SAT agencies. The project director has requested a no-cost extension of the NIE-RDUP time period to use remaining funds to close out the current project sites. No formal approval has been received from NIE, although the project director is optimistic about this approval.

RBS has somewhat institutionalized part of the PSIP process in a three-state NIE-funded project to assist schools to determine selected critical variables, collect data on the variables, compare the results with research findings, and identify appropriate strategies for improvement. The process recycles with another set of variables. Program analysis aspects of PSIP are being used to provide a starting point for the determination of critical variables. This project deals in the areas of critizenship, career preparation, and basic skills. The assistant director of the project was one of the RBS representatives in the PSIP.

## IV. Analysis

The Pennsylvania School Improvement Program was a large-scale effort to link together agencies at the state level (PDE, LRDC, RBS, RISE), the regional level (IU), and the local level for the purposes of providing technical process assitance in needs identification, knowledge consolidation, search and selection of R&D products, and implementation. The overall structure and functioning of the project relative to one local site in one of the two IU's that entered the project in the fall of 1976 have been presented in earlier sections of this linkage case study. This section is devoted to an analysis of the factors or forces that have been identified in the literature and in case study writer meetings as influencing inter-agency linkage and linker effectiveness, the structures and procedures of the project used to deal with these factors, and the effects of these structures and procedures on the project's ability to achieve its purposes.

### A. Inter-Agency Level

#### 1. Typical Forces Affecting Inter-Agency Linkage

There are several forces which potentially affect the development and maintenance of inter-agency linkage of educational organizations. Some of these forces have more potential to affect inter-agency linkage vertically, i.e., national↔PSIP project↔regional (IU)↔local, while others have higher potential effects on horizontal inter-agency linkage, i.e., agencies participating at the state project level (PDE, LRDC, RBS, RISE) and local groups (LAT with other teachers and LAT with local administration).

Forces which have been identified as having potential for affecting inter-agency linkage are:

(a) Goal diffuseness or goal ambiguity

(b) Lack of recognized, consistent need for inter-agency linkage

(c) Vulnerability

(1) Autonomy threats

(2) Territoriality threats

(d) Dispersion, physical distance

(e) Social distance, differences in training, roles, and experiences

(f) Short perceived life of the linkage

(g) Lack of resources for developing and maintaining linkage

(h) Inadequate communication flow

There are at least two mediating factors that influence the extent to which forces may affect the development and functioning of inter-agency linkage. One dimension which should be considered is the previous nature of inter-agency linkage. If the linkage is based on an already existing linkage, then, to the extent that the purpose and operation of the linkage are similar to those that existed in the past, there may be less probability of negative influences of those forces. If the function of the new link is different than previous links, a great deal of effort may be needed to make sure that the new functions are understood and agreed upon by both agencies, and that each agency is able to communicate the nature of the new linkage to their other respective linking agencies. In some situations, this task can be more difficult than the creation of new linkages. Developing new linkages requires the development of understanding among the agencies of the

motivations, needs, and resources available from each agency. Understanding may exist between agencies that have prior or current linkages, but it may be counter to new linkage roles.

The other dimension which should be considered is the vertical or horizontal nature of the inter-agency linkage in terms of direction of the services or resources provided. There is a tendency for an agency whose mission is to serve large, geographically dispursed service receivers, to view its mission in general, somewhat theoretical, terms. Needs of client groups at the local level may be viewed in terms of generalities since the agency may be unable to help meet specific needs that are the function of rather complex local conditions. As levels become more specific or homogeneous, needs become much more specific and tempered by local conditions. At the local school level, needs and expectations become more personal, practical, and influenced by day-to-day happenings. Thus, when examining the consistency of needs and expectations between agencies at different service levels, there may be potential for misunderstanding of linkage purposes and procedures. Linkages between agencies on a horizontal service level are somewhat less prone to some of the problems.

Figure 11 presents a framework of the inter-agency linkages existing prior to the project and those developed specifically for this project in terms of direction of services or resources. This framework will be used in the discussion of predicted effects of the various forces on inter-agency linkages. While this is a simplified framework, with some of the entries based on the judgment of this writer, it does provide a rationale for

Figure 11

NATURE OF INTER-AGENCY LINKAGES BY DIRECTION OF SERVICES OR RESOURCES AND LINKAGE STATUS AT START OF PSIP

| Linkage Status at Start of PSIP | Direction of Services or Resources | |
|---|---|---|
| | Vertical | Horizontal |
| NEW | NIE↔PSIP | IU↔IU/L |
| | SAT↔IU/L | PDE↔PSIP |
| | SAT↔LAT | PSIP↔LRDC |
| | IU/L↔LAT | PSIP↔RBS |
| | PSIP↔LSA | PSIP↔RISE |
| | PSIP↔IU/L | |
| EXISTING | NIE↔PDE | LRDC↔RBS |
| | PDE↔LSA | LRDC↔RISE |
| | IU↔LSA | RBS↔RISE |
| | PDE↔IU | LSA↔LAT |

NIE - National Institute of Education

PDE - Pennsylvania Department of Education

PSIP, M&E - Pennsylvania School Improvement Program, Management and Evaluation

SAT - School Assistance Team, Agency representatives (Relative to the case study site, this does not include PSIP management or evaluation personnel.)

LRDC - Learning Research Development Center (two representatives)

RBS - Research for Better Schools (three representatives)

RISE - Research Information Services in Education (three representatives)

IU - Intermediate Unit, other than project services

IU/L - Intermediate Unit B (linker and assistant executive director, PSIP functions)

LSA - Local School Administration in School N and district

LAT - Local Action Team in School N

the discussion of some of these forces. Perhaps the greatest weakness of this framework is its focus on inter-agency linkages rather than inter-personal linkages. In some cases, prior inter-agency linkages did not involve the persons actually participating in this change effort. However, in the desire for parsimony, it will be assumed that inter-personal linkages are largely influenced by prior inter-agency relationships. Inter-personal linkages are discussed in the latter half of this analysis section.

New, vertical service or resource inter-agency linkages include: the linkage between NIE, the funding agency, and the PSIP; the linkage between the SAT and the project aspect of IU-B as represented by the primary linker; the linkage between the SAT and the LAT; the linkage between the IU-B, project specific, and the LAT; the linkage between PSIP and the School N district administration; and the linkage between the PSIP management/evaluation and the project aspect of the IU. It will be pointed out that these linkages will be more prone to problems or potential negative effects of forces than other types of linkages.

Two of the new, horizontal service or resource linkages tend to be host-agency relations type linkages more than inter-agency type linkages. These were developed specifically for the project and will be prone to influences of some of the forces discussed in this section. These two linkages are: the linkage between the host IU and the project aspect of the IU as represented primarily by the IU linker and the linkage between the state department of education and the PSIP central staff

as represented by the project director and project evaluator. Even though some of the people involved in these linkages had strong ties with their host agency, the project required the development of new linkages with specific functions other than ones that existed before. The other linkages in this category were the ones between the PSIP management/evaluation function and the three support agencies. While these linkages might fit into the new, vertical linkage category, they are placed in the new, horizontal category for two reasons. First, major decision-making in the project operations with the original sites was to be a shared responsibility of the PSIP staff and agency representatives. Secondly, the resource flow for project activities was more horizontal than vertical. Funding was provided for PSIP by NIE to include the services of those three agencies. In the way the funded project was structured, PSIP did not exist without the three agencies.

Certain existing, vertical linkages can be identified. These tend to be very stable and have existed over a substantial time period. It will be pointed out that these linkages tend to be less prone to influences of the forces to be discussed.

Existing, horizontal linkages tend to be those between the major project participation agencies (LRDC, RBS, and RISE), and the one between the local administration and the local participating group (LAT). These linkages will be predicted to be influenced by some of the forces affecting inter-agency linkage development and operation.

While this discussion of the factors that relate to development and understanding of the development of inter-agency linkage, is presented in a rather simplistic manner, it is actually much more complex. The degree to which purposeful linkages develop and operate is an interaction of at least these two dimensions, and probably several others. However, this view permits the prediction that certain linkages may be more or less likely to be influenced by certain types of forces recognized as being barriers to effective linkage development and operation. This section discusses what is meant by the force, a rationale to support the need to consider the force as being potentially influential, the PSIP linkages that might be more likely to be affected, and the extent to which these forces seemed to be operating in the PSIP project. Later this writer discusses mechanisms and their effects for dealing with these forces.

The first two forces to be discussed are goal diffuseness or goal ambiguity and lack of recognized, consistent need for inter-agency linkage. Since these seem similar, it might be useful to indicate this writer's distinction between the two. Goal diffuseness or goal ambiguity refers to the situation where goals of linkage agencies are different or unclear, while lack of recognized, consistent need for inter-agency linkage refers to the situation where goals may or may not be diffuse or ambiguous, but the view for the need to create linkages is disparate. In other words, there may be a consistency of goals between agencies, but a discrepancy in perceived value of linkage development as a strategy. While goal diffuseness

or ambiguity relates to the "What do we want to do?" question, the lack of recognized, consistent need for inter-agency linkage relates to the "How are we going to do it?" question. Goal diffuseness/ambiguity is a product issue, while recognized, consistent need is a process issue.

a. Goal Diffuseness, Goal Ambiguity

Sieber (4,131) has defined goal diffuseness as a "lack of clarity and focus among the goals of educational organizations." This is very similar to what Miles (3,237) refers to as goal ambiguity or the difficulty in specifying outputs of educational organizations. Every educational organization has a set of goals which exist in various forms and which may or may not have an influence on actual practice. When attempting to create linkages, it is important that there be some consistency of goals between agencies. However, the critical set of goals in any linkage structure is the set of goals of the ultimate target group for which the structure is designed to assist. While the linkage agencies can participate in helping the local participating teacher group define goals, and they probably should, if the target teacher groups cannot or does not define its goals, then there is no basis for providing focused assistance. Goals defined and agreed upon at the local level should provide input for linkage agency personnel to focus the provisions of resources. Of course, the linking agencies must make a determination of the extent to which local goals are compatible with their goals

and that their agencies can provide resources that will help the local group attain its goals.

One of the major reasons for goal diffuseness and goal ambiguity problems in linkage structures is that goals are often determined at national and state levels and then "laid-on" the local level. Often, these goals are too general and not responsive to local pressures and needs. For years, the Federal involvement in education has created goals for public education. With recent community pressure for accountability, school districts are caught in the middle. They do not know who is in control, but they do know it is not usually the district administration or teachers.

Goals determined at higher levels are easily misunderstood or ignored. A receiving agency may either consciously or unconsciously perceive goals of the providing agency as being consistent with their own, in order to receive the services, when they may really not care very much about the goals of the providing agency, unless they are obviously counter to their own. In education, this extreme rarely exists.

It is important for goals of linking agencies to be understood by other agencies. Linkages based on existing or prior links provide for better understanding between agencies as to each agency's goals, how they are consistent with their own, and the agency resources that can be used to help local sites. Agencies entering into new linkage arrangements have to take the time to understand each

other's goals and make sure they are consistent between agencies. Inter-agency goal ambiguity or goal conflict may be more of an issue for agencies entering new linkage arrangements rather than basing them on existing linkages, although it can easily be an issue for either.

It seems also that the closer the inter-agency link is to the local site, the more likely it is that goal diffuseness or ambiguity will have significant negative effects. Energies of local site personnel will be used to deal with trying to understand or resolve goal conflict issues rather than going into the solution of local problems based on a systematic process of problem identification, search and selection, planning, and implementation.

Figure 12 presents a prediction of likelihood of goal diffuseness/ambiguity effects on inter-agency linkages in PSIP. New, vertical linkages tend to be most likely to be prone to negative effects of goal diffuseness/ambiguity. These are linkages that require the development of common understanding of the purposes of the project. To the extent that this understanding is reached early and events do not take place which question these understandings, the potential for problems with these linkages is reduced. Of the six linkages in this category, goal diffuseness/ ambiguity problems did not seem to exist for the SAT-IU project linkage and the PSIP management/evaluation-School N administration linkage. There were four new, vertical linkages which did experience strain because of goal ambiguity. The linkage between NIE and PSIP had three significant

Figure 12

LIKELIHOOD OF FORCES AFFECTING INTER-AGENCY LINKAGE IN PSIP GOAL DIFFUSENESS OR GOAL AMBIGUITY

| Linkage Status at Start of PSIP | Direction of Services or Resources | |
|---|---|---|
| | Vertical | Horizontal |
| NEW | High potential for negative effect | Moderate potential for negative effect |
| EXISTING | Moderate potential for negative effect | Low potential for negative effect |

points of strain. In general. there was little goal ambiguity strain between these two linkage points. However, the NIE site visit consultant's report was a point of strain in this linkage. The goals of the NIE-determined site visit team were in conflict with the goals of the project management. This was a temporary strain. Another aspect of this linkage which was somewhat of a strain was the NIE goal of product utilization in partial conflict with the PSIP heavy focus on process development. Still another aspect of this goal ambiguity strain related to evaluation aspects of the RDU projects. The massive amount of evaluation data collection required by the NIE evaluation contractor, the change in evaluation contractors midway into the project, and the delay in the project evaluator receiving evaluation materials created strain in the PSIP evaluator meeting her evaluation goals. Another aspect of some inconsistency of goals between the NIE-RDUP and the PSIP project relates to the original intents of

personnel developing plans for an seeking NIE funds for the PSIP. The original plans of representatives of the PSIP agencies related more to the use of NIE funds to improve performance on the statewide testing program, EQA. Negotiations with NIE-RDUP staff prior to funding resulted in some modification of the original goals of the project. While this did not seem to have a disruptive effect on overall project accomplishment, it is an example of the providing agency's goals influencing the resource receiving agency's goals. This is typical of most Federally funding programs. This writer is not providing a judgment of this practice, only attempting to demonstrate that this can be a major factor in goal ambiguity or goal conflict problems between providing and receiving resource agencies, especially those that are of the new, vertical type.

Another new, vertical linkage which experienced goal diffuseness/ambiguity strain was the PSIP management/evaluation--IU-B project (as represented by the linker and the assistant executive director) linkage. This strain lasted for about the first year and a half of the project. The PSIP management goal of project intensive work with the linker and massive assistance of the SAT agency representatives was in conflict with the IU assistant executive director-linker goal of IU independence and control of site activities. This strain contributed to the difficulty linker-1 had in becoming an accepted member of the PSIP team. This goal ambiguity or goal conflict was never actually resolved, but the change in linker and the reduced

involvement of the IU assistant executive director tended to create fewer opportunities for this to come up again.

The two linkages with the LAT experienced problems related to goal ambiguity. The LAT's goal was to select and implement an R&D product, a goal shared by the SAT and IU linker. However, another goal of the SAT and linker of guiding the LAT through a very thorough and systematic process was, at times, in conflict with the ultimate goal of the LAT.

New, horizontal linkages are predicted to have moderate likelihood for goal diffuseness/ambiguity strain. The two which could be considered host-agency type linkages (PDE-PSIP and IU-IU/L) did not have any goal ambiguity problems. There were no goal ambiguity or goal conflict problems in the PSIP-LRDC or PSIP-RBS linkages. There was some goal conflict between PSIP management/evaluation and RISE. The PSIP focus on development of process was not entirely consistent with the RISE goal of dissemination of R&D product information and selection of products. This goal conflict did not significantly disrupt overall project operations, but did tend to interact with another force to be discussed later, that of communication flow.

Existing, vertical linkages are predicted to have moderate potential for goal ambiguity or goal conflict problems. However, since these four linkages (NIE-PDE, PDE-LSA, IU-LSA, and PDE-IU) were outside of the mainstream of project activities, there were no goal ambiguity problems directly affecting the project. Had any of these

linkages been essential to ongoing project operations, there would have been a higher potential for goal ambiguity to affect linkage development and operation. The use of structure in the design of linkage arrangements was a facet which reduced the potential for existing, vertical linkage agency goal ambiguity to have negative effects on the project linkages. These agencies had experience in dealing with each other or similar types of agencies so they already had a general understanding of each other's goals. In fact, the strength of some of these linkages was helpful in the development of the other linkages.

Existing, horizontal linkages are predicted to be less likely to have goal ambiguity conflicts that would affect linkage development. All of the agencies had a pretty good understanding of the other agencies' goals. While there were some problems in these linkages, they were more communication flow related than goal understanding related.

b. Lack of Recognized, Consistent Need for Inter-Agency Linkage

Perhaps the most critical factor relating to the development of inter-agency linkage is the recognized need for such linkage development. There must be recognition that there is a need for change that can be met through linkage arrangements. Without such recognition, agencies will typically not devote the resources of personnel time and money required to strengthen existing linkages or develop new linkages. Key persons at each level must recognize the need and this need must be consistent between agencies.

Not only must consistent needs be recognized at the various agency levels, but there must be recognition that participation in the development of linkage arrangements provides opportunity for meeting needs of the participating agencies.

Consequences for not recognizing the need for inter-agency linkage are severe. Lack of recognized need is likely to result in no linkage development, inefficient linkages, or linkages which are based on "hidden agendas." There may be recognition of important needs of the agencies, but if these needs are inconsistent or incompatible between agencies, there are likely to be severe consequences on the development of the linkages. If needs are different, then agency expectations will be different. To the extent that operation of the linkages is viewed as not meeting expectations or not meeting agency needs, the linkages will become ineffective, inoperational, or dormant. Differences in recognized needs and expectations between agencies will influence the flow and understanding of inter-agency communications. It is well recognized that the expectations of the information receiver have a strong influence on how information is received and understood.

Figure 13 presents a prediction matrix for problems resulting from lack of recognized, consistent need for inter-agency linkage development. Any agency which feels the goals can be met through other than the use of or the extent of the linkage arrangements will tend to not commit resources and effort into linkage development. In this

way, agency vulnerability can be reduced, a force to be discussed later in this linkage case study. To some extent, there was one agency which tended to have this feeling, the IU. Thus, it is predicted that the PSIP-IU/L and SAT-IU/L linkages would be prone to such problems. This is the reason the new, vertical linkage cell is indicated to have high potential for negative effects resulting

Figure 13

LIKELIHOOD OF FORCES AFFECTING INTER-AGENCY LINKAGE IN PSIP LACK OF RECOGNIZED, CONSISTENT NEED FOR INTER-AGENCY LINKAGE

| Linkage Status at Start of PSIP | Direction of Services or Resources | |
|---|---|---|
| | Vertical | Horizontal |
| NEW | High potential negative effect | Moderate potential for negative effect |
| EXISTING | Low potential for negative effect | Moderate potential for negative effect |

from a lack of recognized, consistent need for inter-agency linkage as a project strategy. As has been pointed out, there was a discrepancy in the views of the PSIP management and the IU assistant executive director relative to the balance of SAT-LAT linkage and linker-LAT linkage to be desired in working with IU-B schools.

To some extent, another new, vertical linkage could be considered to have had some inconsistency in feelings of the need for the extent of linkage work with local groups. While NIE-RDUP staff sought projects which were

based on the use of a linker, they were somewhat concerned about the massive use of highly-trained and expensive personnel in face-to-face contact with local teacher groups. Some NIE-RDUP staff felt this was an unrealistic approach to school improvement because of the high expense involved in replication of the process. However, this was not the primary reason PSIP involved the use of the SAT agency representatives. The PSIP rationale was that the use of the SAT agency representatives in the local sites would result in their ability to develop more useful material resources for a linker to use in future local school interactions without massive support from SAT agency representatives. The third year of the project has been testing this notion in other than the two original project IU's.

The other linkages in this category (SAT-LAT, IU/L-LAT, and PSIP-LSA) did seem to have some problems in lack of consistent, recognized need for linkage. These are all linkages with the local site. It has been pointed out that local participants tended to be more interested in the outcome of the activity, selecting and implementing R&D product(s), than in the process of getting there. While they were generally pleased with the assistance provided by vertically-arranged project agencies, there were points where the LAT reacted to what they felt was excessive process specificity and direction. Thus, there were times when local participants did not share the SAT, IU/L, or PSIP management view of the need for all of the inter-agency linkages.

New, horizontal linkages could be predicted to have moderate potential for problems related to lack of recognized, consistent need for inter-agency linkage. In PSIP, this did not seem to be much of a problem. The host-agency type linkages (IU-IU/L and PDE-PSIP) did not seem to have these problems. The other linkages in this category (PSIP-LRDC, PSIP-RBS,and PSIP-RISE) had recognized, consistent feelings about the need for the inter-agency linkages. This seems to be the result of the large amount of time spent early in determining agency responsibilities and the shared decision-making in project planning and operation. This shared decision-making early in the project reduced potential for problems of lack of recognized, consistent need for inter-agency linkage in the existing, horizontal linkage arrangements as well. Since the existing, vertical linkages were indirectly involved in the project procedures determination, they tended to not have problems in dealing with the actual procedures developed by the project staff and agency representatives.

c. Vulnerability--Autonomy and Territoriality

Both Miles (3,240) and Sieber (4,123) have discussed the issue of vulnerability of educational organizations. Sieber's definition of vulnerability provides a good starting point for this discussion: "the probability of being subjected to pressures that are incompatible with one's goals without the capacity to resist." He goes on to point out three organizational characteristics related to vulnerability. These are: "subjection to the

environment and the goals of the organization, and inadequate resources for achievement of organizational goals."

Vulnerability is more pervasive for local education agencies than for those who serve at the state or national levels. Large-scle, multi-mission state and national agencies are not immune to vulnerability, but they have set up bureaucratic procedures which blunt the impact of environmental pressures faced by their constituents in the local setting. At the local level, vulnerability is a two-edged sword. It not only creates pressures on the local district administration and teachers, but it also provides a motivation for getting involved in activities that have the potential for reducing vulnerability. However, if those activities are expected to reduce vulnerability and they do not, there can be a great deal of dissatisfaction and hostility directed at the initiators of the activities. Thus, a major change effort must be directed at reducing vulnerability of local education personnel and local personnel must have a clear understanding of the exact purposes and services provided through participation. Otherwise, local personnel will view involvement as being related to solving their most pressing problems and even though the services provided may be useful, they may be viewed as "not what we really needed."

Vulnerability issues also affect the development of inter-agency linkage. There are two aspects of vulnerability that should be distinguished: autonomy and territoriality. Autonomy refers to the ability of an agency to

maintain control of independence while being served or provided resources from another agency. These resources are processed internally so that the receiving agency is better able to serve its own client group. Territoriality refers more to the situation where two agencies, who already have the same client group, collaborate and share resources to serve that client group. This distinction may become more focused if the vertical-horizontal aspect of inter-agency linkage is considered. Typically, a vertical linkage is developed so that an agency receives resources from a "higher" agency which are used by the receiving agency so that it can better serve its client group. The receiving agency provides the processed resources to the next "lower" level without the direct involvement of the original providing agency. A resource receiving agency, at any level, is concerned that the receipt of resources may affect its autonomy. Receiving agencies are wary that acceptance of resources might make them dependent on the providing agency and thus reduce their autonomy. This concern is compounded by the degree to which this is a new linkage rather than the strengthening of an already existing linkage.

Territoriality, on the other hand, seems to be more of an issue in the development of horizontal linkage when two agencies are serving the same client group with similar services. Inter-agency linkage between two agencies such as this is less prone to problems of autonomy since these have probably been dealt with prior to the

development of the linkage, but they are prone to concerns that one of the agencies may be viewed as a better provider of services, thus reducing the credibility of the other agency with the client group.

(1) Autonomy Threats

Figure 14 presents a description of the predicted potential for autonomy threat effects on project operations. Autonomy threats are more a function of the direction of services or resources than the status of linkage at the start of the project. Linkages predicted

Figure 14

LIKELIHOOD OF FORCES AFFECTING INTER-AGENCY LINKAGES IN PSIP VULNERABILITY IN FORM OF LOSS OF AUTONOMY THREAT

| Linkage Status at Start of PSIP | Direction of Services or Resources | |
|---|---|---|
| | Vertical | Horizontal |
| NEW | High potential for negative effect | Low potential for negative effect |
| EXISTING | Low potential for negative effect | Low potential for negative effect |

to have the highest potential for autonomy threat problems are the new, vertical linkages. Of these linkages, the ones related to the local level seem most prone to autonomy threats. Local level autonomy threats tend to be related to feelings of quasi-professionalism. A local group, or for that matter any group, with feelings of quasi-professionalism

will tend to be more threatened by a linkage with an outside, especially vertically-arranged, agency. One reasons such a group might develop a linkage with an outside agency, and take the risks of an autonomy threat, would be to protect territoriality. School N staff did not seem to have either autonomy or territoriality problems. The LAT was a relatively highly-trained, self-confident group so they did not seem threatened by the SAT or linker. However, another factor relating to lack of autonomy threat was probably the level of SAT involvement. In addition to the linker, there were only two SAT agency representatives who had major involvement with ongoing LAT-SAT activities. Had there been more SAT agency representatives, autonomy threats might have been more likely. In the other linkage case study site, located in IU-A, very often there were as many SAT as LAT members in the sessions. While there were other problems in the IU-A linkage case study site, the threat to autonomy, combined with feelings of quasi-professionalism, prevented success with the LAT (see Linkage Case Study for IU-A, J. Barnette). Also, the fact that the School N principal was involved with the LAT reduced territoriality threat to the local teachers, so the LAT felt comfortable to develop linkages with the outside agencies.

There were two of the inter-agency linkages that did experience autonomy threats. They were the SAT and PSIP linkages with IU/L. It has been pointed out

that the IU assistant executive director was very interested in maintaining control of the project in the IU. He felt that too much involvement of the PSIP management/evaluation and SAT agency representatives in making decisions about project activities in the IU might reduce the autonomy of the IU. Linker-1 in considering the IU as the host agency and in trying to deal with feelings of project marginality tended to align herself with the assistant executive director creating more strain on these linkages.

Two of the linkages in this cell (NIE-PSIP and PSIP-LSA) did not seem to experience autonomy threats. Resources from NIE did not place unrealistic strain on the ability of the PSIP staff and agency representatives to maintain autonomy in most aspects of project design and implementation. There was some interaction between the PSIP management and the local school administration, but not enough for any autonomy threat to occur.

The existing, vertical linkages were between well established agencies with varying degrees of prior involvement, the nature of which was usually fairly routine. Since PSIP was only a part of the total involvement of the agencies in these linkages, agencies (which, for the most part, had already developed mechanisms for protecting autonomy), there was low potential for problems due to autonomy threat.

Agencies in new or existing horizontal linkages tend to have fewer problems with autonomy threats than problems resulting from territoriality threats.

(2) Territoriality Threats

Figure 15 presents a matrix indicating potential for negative effects due to territoriality threats.

Figure 15

LIKELIHOOD OF FORCES AFFECTING INTER-AGENCY LINKAGES IN PSIP VULNERABILITY IN FORM OF TERRITORIALITY THREAT

| Linkage Status at Start of PSIP | Direction of Services or Resources | |
|---|---|---|
| | Vertical | Horizontal |
| NEW | Low potential for negative effect | High potential for negative effect |
| EXISTING | Low potential for negative effect | Moderate potential for negative effect |

New, horizontal service or resource linkages tend to be most likely to have problems in linkage development and operation because of territoriality threats. To the extent that new linkage purposes are understood by the agencies and that there is an equitable exchange of resources or services between the agencies, there will be less of a tendency toward territory protection. In addition, if project agency roles are consistent with host-agency roles and if there are differentiated roles that complement rather than conflict, then there is less tendency for agencies to feel threatened.

In one of the new, horizontal host-agency type linkages there was high potential for territoriality threat. This was the PDE-PSIP linkage. Some of the activities of PSIP could have been interpreted by other PDE components to be a territory threat. However, the work of the project director to involve other PDE units and keep PDE administrators informed of project activities reduced problems of territoriality threat. Recently, however, PSIP will be faced with new territory issues as PDE reorganizes with a proposed focus on school improvement, the focus of PSIP. The other host-agency type linkage in this cell (IU-IU/L) did not experience territoriality problems.

Of the other three linkages in the new, horizontal cell (PSIP-LRDC, PSIP-RBS, and PSIP-RISE), one of them did experience strain because of territory protection concerns. It was recognized that the immediacy of the services provided by RISE was a critical component in any long-term operation of PSIP, or a similar R&D product search and implementation type operation. However, during the last of the three project years, RISE has become somewhat concerned about the degree to which it would be involved in further state-operated school improvement efforts. This has created a territoriality threat for RISE and has placed somewhat of a strain in the PSIP-RISE linkage relationship.

Existing, horizontal linkages have moderate potential for territoriality threat problems. However,

since the agencies in these linkages have better understanding of each other's goals and services, and there does not seem to be conflict in these, territoriality threat does not seem to be a pervasive issue. In fact, participation in the project of representatives of these agencies has resulted in increased awareness of each other's roles, goals, and interests.

d. Dispersion, Physical Distance

Any large-scale inter-agency linkage structure which includes agencies spread out geographically must consider the problems created by physical distance. There are two major areas of potential problems relating to physical distance. One is what Miles (3,232) calls communication adequacy. Physical distance can influence the amount, type, and accuracy of information flow between agencies. Ability to provide process assistance services to local sites is the other area of potential problems relating to physical distance. This is the area to be discussed in this section.

Physical distance problems are difficult to predict using the direction of services or resources and status of linkage at start of the project framework. The project had the resources to reduce the potential of this being a problem. None of the linkages with the local site seemed to suffer from physical distance problems except the LRDC-local site linkage. This would not have been much of a problem had the LAT not expected an LRDC representative to be involved in at least some of the SAT/LAT meetings,

but they did. Although lack of LRDC involvement in School N activities did not seem to have had any effect on progress, it did create a question on the part of the LAT as to the role or services provided by LRDC. It should be pointed out that a decision had been made early in the project for LRDC to be more involved with IU-A and RBS to be more involved with IU-B. This decision was related to closer proximity of these agencies to the IU's. The agencies working with IU-B tended to be relatively close together, all were within about a two-hour drive. LRDC was the only agency that was over 100 miles from IU-B.

The linkages between the project agencies had the potential for physical distance problems. Considering the locations of IU-A, IU-B, PDE, LRDC, RBS, and RISE, agencies were spread out almost to the four corners of the state. Physical distance problems were accounted for by project team meetings, the frequency of which was high in the first year of the project, and usually weekly contact between the project management and the SAT agency representatives. While the sometimes large amount of travel required of project staff and agency representatives was a personal burden on individuals, it does not seem that physical distance was as much of a force affecting inter-agency linkage development and operation as might be expected.

e. Social Distance, Differences in Training, Roles, and Experiences

In the development of inter-agency linkage, differences in agency personnel training, roles, and experiences can

be a factor. Such differences might create problems for developing and maintaining linkages because they may lead to communication difficulties, lack of mutual trust, and/or inability to work cooperatively. There is the possibility that not only professional, but social status differences can affect linking arrangements. While the potential for those problems seems somewhat lower in inter-agency links at the national or state levels, inter-agency links between national or state levels and the local level are particularly subject to such problems. Such effects on linkages with local agencies are attributable to what Sieber (4,128) refers to as "quasi-professionalism," a characteristic which is common to many persons at the local level and which leads to feelings of status-insecurity. Often the results of these feelings come out as protests, whether warranted or not, against the involvement of "professors," persons from state agencies, or persons from research organizations. This may especially be a problem when these outside "experts" conduct sessions with local teacher groups.

Figure 16 presents a prediction matrix of the potential for problems relating to social distance differences which could be the result of agency personnel training, role or experience differences. Linkages more prone to this type of problem would be the vertically-arranged linkages, primarily new linkages with the local level. It would be predicted that the PSIP and SAT linkages with the LAT and local school administration would be most

Figure 16

LIKELIHOOD OF FORCES AFFECTING INTER-AGENCY LINKAGES IN PSIP SOCIAL DISTANCE, DIFFERENCES IN TRAINING, ROLES, EXPERIENCES

| Linkage Status at Start of PSIP | Direction of Services or Resources | |
|---|---|---|
| | Vertical | Horizontal |
| NEW | High potential for negative effect | Low potential for negative effect |
| EXISTING | Moderate potential for negative effect | Low potential for negative effect |

likely to have these types of problems. While it took some time for project personnel to develop rapport with the LAT, this happened relatively quickly, probably as a result of LAT feelings of professionalism and early acceptance of the purposes of the linkages and the project agency personnel working with School N. Existing, vertical linkages are subject to such problems, but usually these have been dealt with in prior inter-agency interactions.

f. Short Projected Life of Linkage

The extent to which there is a likelihood of continued linkage that serves other or future purposes is a factor in the development and maintenance of linkage. Efforts to develop permanent, purposive linkages will be taken much more seriously than the creation of temporary linkages. Unfortunately, the field of education almost always connects the word "temporary" to the term "project." Projects come and go and many local participants have come to feel that the projects will probably not have

any lasting impact. Temporary linkages have a difficult time surviving after the project ends. If temporary linkages are between agencies that already have other linkage arrangements there is a greater chance of their survival.

Figure 17 presents a prediction matrix for problems resulting from the perception that the linkages have a

Figure 17

LIKELIHOOD OF FORCES AFFECTING INTER-AGENCY LINKAGE IN PSIP
SHORT PERCEIVED LIFE OF LINKAGE

| Linkage Status at Start of PSIP | Direction of Services or Resources | |
|---|---|---|
| | Vertical | Horizontal |
| NEW | High potential for negative effect | Moderate potential for negative effect |
| EXISTING | Moderate potential for negative effect | Low potential for negative effect |

short projected life. Again, the new, vertically-arranged linkages are most likely to have problems resulting from limited linkage life. Linkages with LAT groups typically are expected to end at a specific time. The extent to which LAT's believe their goals will be achieved during that time will reduce problems associated with short-lived linkages. However, if local goals are not met, the local group will probably demonstrate great frustration and this may reduce the possibility of opportunity for the project or other projects of the providing agency host to develop other linkages with this local group.

The situation with School N is a good example. Had the LAT not found a product they felt would be useful for their purposes, it might have been difficult for the IU or PDE to interest the school staff and possibly the school administration in other linkage arrangements in the future. Thus, the problems of new projected short-lived linkages that do not meet expectations can affect the more established linkages of host agencies.

Project linkages with the IU may also be prone to problems of temporary linkages. IU's tend to be involved in several projects that have specific ending dates, so they tend to live with the operation of short-term linkages. However, if IU personnel perceive the possibility of a short-term linkage developing into a longer term linkage, consistent with IU goals, then there will be more of a commitment of the IU to support short-term linkages. This was the case with IU-B. In spite of some autonomy threats and project--linker-1 marginality, the IU continued to support the project because the assistant executive director felt the linkages being developed would serve the goals of the IU beyond the funded project period.

Existing linkages will be less prone to potential problems due to short-term linkages. Typically, these agencies enter into short-term arrangements frequently.

The new, horizontal linkages of the host-agency type are very prone to problems of short projected linkage life. This may relate to feelings of marginality of

personnel who serve in time-specific positions. There were two PSIP linkages of this type, the PDE-PSIP and IU-IU/L linkages. The IU-IU/L short-term linkage was essentially a one-person linkage, the IU linker and the host IU. Short-term linkages of the linker and the host IU can create a linker--host-agency marginality problem. This is discussed later in this linkage case study.

There was high potential for problems resulting from short projected linkage life for the PDE-PSIP management linkage. The project director had been hired from outside of PDE specifically for work in PSIP. There was no commitment made to this individual beyond the NIE funding period. However, there was the potential and hope for lengthening this period beyond the funding period. A great deal of the project director's effort was spent in changing this linkage from a short to a long-term linkage. This effort seems to be paying off in terms of high likelihood that the project, or close variation, and the project director will be involved in future PDE school improvement efforts.

g. Lack of Resources for Developing and Maintaining Linkage

Resources are a critical factor in the development of inter-agency linkage. In fact, linkages would not exist if there were no resources or services to share between agencies. Although the ultimate resource is money, it is transformed into personnel time to provide information and technical assistance through various communications media.

Inter-agency linkage relies on the assumption that one agency can provide the other with certain resources, not otherwise available, for which the other agency, in return, provides resources not available to the first. In other words, there must be an exchange of resources or services between agencies. If either one of the two agencies, especially those on horizontal level, feels it is getting less than it is putting in, the linkage is not likely to last. On the vertical structure, this is sometimes a little different. In projects such as the NIE R&D Utilization projects, agencies at lower levels tend to expect more tangible resources such as money, information, and personnel time in exchange for being subjects of an "experiment" and information sources for educational research reports. The major problem with this approach is that it is hard to develop the degree of commitment needed at the local level for any lasting change effort. In a sense, projects set up an unnatural flow of resources. In most cases, resources come from the top down, with little expected from the local level other than information on how things worked. This approach does little to create ownership, commitment, or a stake in the action. Without substantial local district intput of resources, it is likely that the inter-agency linkages with the site will be unproductive and, on occasion, viewed as being an imposition.

Relative to PSIP, it could be predicted that any agency which feels it is getting less than what it is putting in will try to change the flow of resources or

reduce the effectiveness of the link. In addition, if a local site does not commit district resources to the activities of the project, the linkages between the site and the state and national agencies will not be very effective.

Another potential effect on inter-agency linkage is the possibility of discrepancy between resources expected and resources received. If resources that are expected are not delivered or if those delivered are not what was expected, there will be strain placed on linkages. The critical aspect of this problem for PSIP is the provision of resources that are expected by the local participants.

Figure 18 presents a matrix of predictions of the likelihood of problems that may occur as a result of lack of resources. Resources for project operation were not a problem. Therefore, there was low potential for problems

Figure 18

LIKELIHOOD OF FORCES AFFECTING INTER-AGENCY LINKAGE IN PSIP
LACK OF RESOURCES FOR DEVELOPING AND MAINTAINING LINKAGE

| Linkage Status at Start of PSIP | Direction of Services or Resources | |
|---|---|---|
| | Vertical | Horizontal |
| NEW | Moderate potential for negative effect | Moderate potential for negative effect |
| EXISTING | Low potential for negative effect | Low potential for negative effect |

of this type with most of the linkages. Existing linkages did not suffer from lack of resources. One existing linkage which is having lack of resources problems, but not because of a lack of project resources, is the LSA-LAT linkage in School N. Implementation resources may not be available from the school administration. If they are not available or if they are at a reduced level, there is likely to be a strain in the LSA-LAT linkage. However, the project resources expected by the local level were viewed as being delivered. Resources committed by the local level in terms of time and financial support did result in a feeling of ownership and School N commitment for implementation.

There was moderate potential for strain in the new, horizontal linkages. There was some strain in the PSIP-LRDC linkage, but not in terms of lack of resources. The strain was a result of the perception that LRDC was not providing the services at a level commensurate with the financial support they were receiving. This feeling was shared by the PSIP management and some agency representatives from the other two SAT agencies. By mutual agreement between the project director and LRDC, the level of financial support was reduced and finally terminated in December 1978. Relative to other linkages in this cell, the project director was flexible in resource allocations and modifications.

h. Inadequate Communication Flow

It has been pointed out that communication flow is essential for the development and maintenance of linkages. Early communication is necessary for setting up the linkages and is usually a different type of communication than is needed for linkage maintenance. Early communications should result in understanding of the goals of and need for development of the linkage. Agencies must understand what the benefits are for involvement and the consistency between these benefits and the agency's goals or mission. They must also understand what services are expected of them, how the services will be used, and how agency's efforts are reliant on each other. Agencies need to be aware of potential linkage problems and contingency plans for dealing with any predictable dysfunction that may occur. It is critical that early communications be face-to-face and that agency representatives get to know each other on a personal as well as professional basis. They should have time to share information on training backgrounds, roles they have had, and both professional and personal experiences.

The extent to which early communications lead to those understandings and personal relationships may predict the extent to which effective maintenance communications will occur. In terms of maintenance linkages, agency representatives need to be aware of progress and services being delivered by each of the agencies, they must be aware of

other agency activities that may affect their own ability to provide the services expected of them, and they must feel free to communicate without threat to the other agency or their own agency.

In an effort as complex as PSIP, in terms of the number of agencies and persons involved and in terms of the inter-reliance on agency services and products, it is critical that there be some management of communications. This was one of the primary roles of the project director.

Figure 19 presents a matrix of the likelihood of problems resulting from inadequate communication flow. The only cell which has less than high potential for problems is the existing, vertical cell. The reason for this is that the linkages in this cell were somewhat tangential to ongoing PSIP activities. However, had there been a communications catastrophy in PSIP linkages, these linkages would probably have experienced strain as a result.

Figure-19

LIKELIHOOD OF FORCES AFFECTING INTER-AGENCY LINKAGE IN PSIP
INADEQUATE COMMUNICATIONS FLOW

| Linkage Status at Start of PSIP | Direction of Services or Resources | |
|---|---|---|
| | Vertical | Horizontal |
| NEW | High potential for negative effect | High potential for negative effect |
| EXISTING | Moderate potential for negative effect | High potential for negative effect |

It should be pointed out that considering the potential for communications problems in such a complex structure, communication flow in PSIP was excellent. Problems that did occur were handled mostly at above-site linkage levels. Some conflict between the IU-B linkers and SAT agency personnel was observed by LAT members, but it did not seem to affect their feelings about the project or the activities. Problems resulting from inadequate communications with the local site contributed to the LAT not completely understanding the need for some of the process steps and not completely understanding the respective roles of some of the SAT agency representatives.

There were incidences of communication problems in the new, vertical linkages. While communication between NIE and PSIP was, in general, adequate and sometimes very good, there were a few problems. One, which has not been mentioned before, was a feeling on the part of the project director that NIE-RDUP staff did not provide enough feedback in response to monthly reports and requests for answers to some project management questions. Although the project director was not completely happy with this situation, it did not seem to have any major disruptive effect on linkage development or maintenance. Problems in the communication area between NIE and PSIP existed on two aspects of the evaluation of the RDU projects. Both have been mentioned before. One was the inadequate communication as to the purposes, methods, and use of the results of the NIE consultant's site visit in November 1977.

The other related to problems in the delivery of evaluation instruments from the original RDUP evaluation contractor and the changes in evaluation procedures when a different contractor was funded to evaluate the RDU projects.

There were communications problems in the primary project linkages with IU-B. The PSIP management/evaluation--linker-1 linkage was characterized by inadequate and sometimes hostile communication. It was not long into the involvement of IU-B that these problems started. They were confounded by inadequate communication between linker-1 and the RBS and RISE representatives. The communications problem tended to worsen and individual personalities started being influential. The severity of these problems became much lower, but PSIP--IU-B communications problems were not completely solved, with the resignation of linker-1. The linkage between linker-2 and the RISE representative experienced communications problems regarding role definition and expectations. Communication between the project director, linker-2, and RISE personnel tended to reduce this problem, but the remnants still seemed to exist toward the end of the project.

New, horizontal linkages experienced some communications problems. There was a problem with the PSIP-LRDC linkage regarding services to be performed by LRDC staff. This problem was resolved through mutual agreement to modify the LRDC scope of work. The PSIP management--RISE linkage was involved in communications problems which have already been mentioned. In addition, however, RISE representatives

felt they were not adequately informed about project activities in the third year. The two new, horizontal host-agency type linkages (PDE-PSIP and IU/L-IU) did not seem to suffer from problems related to inadequate information flow. In fact the PDE-PSIP linkage was characterized by thorough, continuing communication throughout the project period. The adequacy of the communication in this linkage is a major factor in the high probability that PSIP operations will be installed in the routine PDE services to local schools.

There were some problems resulting from inadequate communications flow in some of the SAT agency linkages at the start of the project. Functions and expectations were not entirely clear between LRDC and RBS in efforts to develop program needs procedures and materials and between LRDC and RISE in efforts to develop knowledge consolidation procedures and materials. The late hiring of the project director seemed to have prevented early resolution of these problems. There was, however, communications assistance provided by both LRDC and RBS in contacting other labs and centers to speed up the process of getting products for RISE to review and thus, a more complete set of products to be considered for selection by LAT's.

## 2. Mechanisms (and Their Effects) Used to Deal with Forces Affecting Inter-Agency Linkage

Several mechanisms were set up to attempt to reduce problems in the development and maintenance of inter-agency linkage and to deal with forces having potentially negative effects. Some of these mechanisms were set up to deal with specific forces. However, most were based on typical approaches in the design, operation and management of large-scale educational projects. The fact that they seemed to reduce the potential for problems in linkage development and maintenance was welcomed.

The mechanisms which tended to reduce negative effects on inter-agency linkage development and maintenance are as follows:

a. PSIP structure

b. SAT, team approach

c. PSIP, SAT, linker meetings

d. PSIP internal communications system

e. PSIP external communications system

f. Centralized PSIP management and evaluation

g. NIE resources

h. LAT/SAT meetings

i. LAT/SAT process materials

Figure 20 presents a matrix of these mechanisms and the forces affecting inter-agency linkage discussed earlier. It indicates that there were at least two mechanisms which reduced the potential of negative effects for each of these forces.

## Figure 20

### EFFECTS OF MECHANISMS ON REDUCING THREATS TO INTER-AGENCY LINKAGES

| LINKAGE THREAT | MECHANISM: PSIP Structure | SAT, Team Approach | PSIP, SAT, Linker Meetings | PSIP Internal Communications System | PSIP External Communications System | Centralized PSIP Management/Evaluation | NIE Resources | LAT/SAT Meetings | LAT/SAT Process Materials |
|---|---|---|---|---|---|---|---|---|---|
| Goal Diffuseness/Ambiguity | | X | X | | | | | X | |
| Lack of Recognized, Consistent Need | | X | X | | | | | | |
| Vulnerability--Autonomy Threat | (X) | | (X) | (X) | | | | X | X |
| Vulnerability--Territoriality Threat | X | X | X | X | X | | | | |
| Dispersion, Physical Distance | | | X | X | | X | X | | |
| Social Distance--Training, Role, Experience Differences | | | (X) | (X) | | | | X | |
| Short Perceived Life of Linkage | | X | X | | X | | X | | X |
| Lack of Resources | X | | | | | X | X | | X |
| Inadequate Communication Flow | X | | (X) | X | X | X | | | |

X = Effectively reduced potential threat

(X) = Effectively reduced potential threat, with at least one significant exception.

a. PSIP Structure

The PSIP structural arrangement helped reduce four of the threats to inter-agency linkage. The vertical service linkages were the ones most prone to autonomy threats. The inclusion of the IU into the vertical structure helped reduce autonomy threats to the local level. Autonomy threats to the IU and SAT agencies were reduced through a structural arrangement which provided for balance in decision-making of the IU, SAT, and PSIP management personnel. As has been pointed out earlier, IU-B did seem to experience autonomy threats. This seemed to be more a result of factors other than structure per se. These other factors were a late start of linker-1 so she was not able to gain enough of a feeling of inclusion into the group and the subsequent personality differences that reduced effective communication flow.

Vulnerability of horizontal linkages in terms of territoriality threats were somewhat reduced through the structure of PSIP. Decision-making in PSIP was mostly a balanced responsibility with PSIP management and SAT representatives having major involvement in the design and operation of project procedures. Thus, the agencies did not feel that any of the other agencies were a threat to their territoriality.

Structure provided for the distribution of NIE resources so it tended to reduce lack of resource threats to the project agencies. Also, the structure provided

for recognized communications flow channels, reducing possible negative effects of inadequate communications flow.

b. SAT, Team Approach

While the team approach might be considered a part of PSIP structure, it provided for reduction of potentially negative threats to inter-agency linkage somewhat differently than structure per se. While structure might be considered to be inanimate, the team approach would be considered to be the human operationalization of structure.

One of the strengths of the PSIP proposal was the team approach to include representatives from the state department, two R&D producers, an R&D dissemination agency, and regional representatives (IU). The team approach was used in writing the original proposal. Thus, there was a very early opportunity for major agency personnel to work together to resolve any agency goal diffuseness/ambiguity, lack of recognized, consistent need for the development of the linkages, and agency territoriality threats. The agencies involved in the team approach included those in the state that would have felt autonomy and/or territoriality threats had they not been involved. Had either LRDC or RBS been excluded from participation, there could have been severe territoriality threat to the agency not included. Had the IU level not been included, it is likely that they would have been threatened by project teams working school districts in their

service region. There seemed to be no potentially influential group not included in the team structure. None of the major higher education institutions in the state sought involvement nor displayed much interest in PSIP.

Another threat to linkage which this team approach seemed to influence was perception of the short life of linkages. While they realized that PSIP was funded for a specific period, agency representatives perceived involvement as having good potential for development of longer term linkages.

c. PSIP, SAT, Linker Meetings

Meetings of project personnel occurred on a regular basis. About once every three months the project agency personnel and the IU linkers met for a two or three day session to review progress in the sites, prepare materials for use in the sites, and to plan or provide information to other interested parties such as other IU's, special interest groups, professional associations, and other PDE projects. The project took advantage of situations where several project professionals were in attendance such as at AERA, PERA, and statewide conferences to get together to work on project concerns. In addition to these meetings, SAT members often worked together the day or evening before a LAT-SAT session. Toward the end of the project, these meetings tended to be less frequent, with the result being increased feeling on the part of one of the SAT agencies (RISE) that they were not being involved enough.

Early team meetings tended to reduce goal diffuseness/ ambiguity and any lack of recognized, consistent needs for linkage problems. In addition, the early meetings provided opportunity for PSIP and SAT agency representatives to get to know each other on a more personal basis, reducing threats of social distance problems. Agency representatives were able to develop greater awareness of other agency's missions and personnel which tended to reduce many potential problems with autonomy or territoriality concerns. In addition, these meetings provided for better communications flow both within meetings and in non-meeting situations and thus reduced some of the physical distance problems of agencies working on common aspects of the project. Development of greater interpersonal interactions of PSIP and SAT agency representatives tended to create feelings that longer term linkages were probable and mutually beneficial.

There was one significant exception to the effectiveness of PSIP, SAT, linker meetings in reducing interagency linkage threats. The linker from IU-B was hired after several of these meetings had taken place. She felt unable to work in to the social structure of project team members. The attention given to the linker in IU-A threatened her social status and since social relationships had already been developed, she felt somewhat socially uncomfortable and did not try very hard to break into the social structure. This contributed to the development of IU-B assistant executive director and linker

feelings of a need to maintain autonomy. This, in turn, tended to reduce the effectiveness of communications between PSIP, SAT representatives and IU-B. Linker-2 was able to attain social acceptance early in her tenure and some of these problems tended to mediate.

The meeting where results of the first year evaluation were discussed (September 1977) created group conflict. While meeting participatns did not have complaints about the data reported, they did question the criteria for evaluation of linkers and the interpretation of the data. Even though several SAT members supported the comments of the IU-B assistant executive director and linker-1, the autonomy of the IU was threatened so much that the IU-B persons did not recognize this support. It was this writer's observation that there was an agreement for review of the evaluation report by the project director, project evaluator, and linker-1 prior to submission to NIE. However, the meeting minutes indicate that the evaluator was not going to change the report. She did not, further aggravating the situation, and the linker resigned about two weeks after the meeting.

d. PSIP Internal Communications System

There were two formal communications procedures in the PSIP internal system. Agency representatives and the linkers submitted monthly progress reports to the project director. These were combined with project management and evaluation reports and submitted to the NIE project monitor and the project team members. In addition,

the project director had telephone conversations with the agency representatives and linkers on a weekly basis during the first two years of the project.

The internal communications system decreased agency vulnerability threats by keeping them informed of PSIP staff and SAT agency activities. The system decreased physical distance problems by permitting a constant flow of information in other than face-to-face situations.

It has been pointed out that the monthly reports contained several comments about the work of linker-1 which she and the IU assistant executive director felt were unwarranted. Since these reports were being sent to the SAT agencies, personnel in PDE, and NIE, they were very concerned about the comments being available to fairly powerful audiences. This defensiveness was manifested in greater desire for and activities to maintain IU autonomy.

With the exception of this situation, the internal communication system served the project well. A great deal of time and effort was expended by the project director to keep communications flow at a high level.

e. PSIP External Communications System

This has to be considered one of the most successful aspects of PSIP. Throughout the project, constant efforts were made to make contact with outside audiences. Press releases, brochures, presentations at state and national meetings, meetings with representatives of other PDE and non-PDE departments and projects, and inclusion of outside

individuals in PSIP activities were the major external communications activities. These activities tended to reduce vulnerability threats to SAT agencies and increased communication flow both internal and external to the PSIP. However, the most significant outcome has been the creation of longer-term linkages. There is a high probability of institutionalization of aspects of PSIP in the state. This might not have been the case had the project not made major efforts in informing and involving project external publics.

f. Centralized PSIP Management/Evaluation

Having a project director and evaluator located in a centralized position in PSIP to coordinate communications and provide a project focal point was a mechanisms which reduced the probability of some forces having negative effects. Such an arrangement reduced physical distance problems, provided for more efficient use of project resources, and facilitated communications flow.

g. NIE Resources

While NIE resource provision was not a project determined mechanism in the sense of the other mechanisms, it should be pointed out that use of these resources did tend to reduce potential problems which would have existed without the funding. NIE funding reduced physical distance threats by providing travel funds for project staff to meet and for project staff to have face-to-face interaction with the local teacher participant groups. NIE

resources have increased the probability of long-term linkages being developed and increased agency capacity to serve local school districts.

h. LAT/SAT Meetings

LAT/SAT meetings tended to decrease goal diffuseness/ambiguity discrepancies in the SAT-LAT and IU/L-LAT linkages. The meetings provided a chance for PSIP staff and LAT members to exchange information and feelings in order to focus project time and fiscal resources in meeting locally-determined needs through the use of validated R&D products. These meetings tended to reduce local autonomy threats and potential problems of social distance between R&D producers and R&D users.

i. LAT/SAT Process Materials

The materials designed to guide the LAT through the PSIP process was a mechanism used to reduce certain threats to linkage development and maintenance. Process materials were designed to somewhat force the LAT to make most of the decisions. This was an attempt to build in ownership by the LAT. It has been pointed out earlier that some LAT members felt they had to make too many of the decisions. Perhaps this attempt to reduce local autonomy threat was a little overdone; at times it led to a great deal of LAT frustration. Process materials were a resource that the local district did not have prior to PSIP, at least not at this level of specificity nor continuity.

The development of the process materials has had a positive effect on the potential for development of longer term linkages. Experience of the PSIP sites in using the process materials has provided information which has been used to streamline the procedures so they can be used with other sites in the state with less direct involvement of SAT agency representatives. Therefore, it looks as though the proposed school improvement unit of PDE will be able to develop long-term linkages with more districts through the use of project-developed process materials.

B. Linker Level

This section discusses forces affecting linker effectiveness, the extent to which they seemed to exist in the PSIP activities in IU-B, mechanisms used to deal with these forces, and the effects of these mechanisms. The linker is defined as the person hired by IU-B host-agency to coordinate and deliver services to the IU schools participating in PSIP. While the SAT representatives could be considered secondary linkers. they will not be subjects of this discussion. However, their relationships with the IU-B linker and actions which affected the work of the IU-B linker will be discussed.

The reader is reminded that there were two persons who served in the role of IU linker during the PSIP activities in IU-B. Linker-1 was hired in December 1976 and resigned in September 1977. Linker-2 was hired in September 1977 and has remained the IU-B linker throughout the duration of the NIE-funded aspects of PSIP. Since these linkers worked at different times in the project,

separate discussions will be presented for the two linkers. These discussions will proceed as follows: (1) typical forces affecting linkers will be presented; (2) how these forces affected linker-1 effectiveness will be discussed; (3) how these forces affected linker-2 will be discussed; (4) typical mechanisms used to deal with these forces will be presented; (5) use of and effectiveness of these mechanisms for linker-1 will be discussed; and (6) use of and effectiveness of these mechanisms for linker-2 will be discussed.

1. Typical Forces Affecting Linker Effectiveness

There are at least seven forces which may affect linker effectiveness in a project such as PSIP. They are:

a. Unclear Role Definition

b. Marginality

1) Relation to the host or employment agency

2) Relative to other project staff and agency representatives

3) Relative to the local site

c. Role Strain, Overload

d. Role Novelty/Non-Routine Tasks

e. Inadequate Communications Flow

These forces are not mutually exclusive and some seem more critical than others. For example, an unclear role definition can easily result in feelings of marginality and/or role strain. Some of these forces are more easily dealt with than others.

a. Unclear Role Definition

One of the most serious barriers to linker effectiveness is an unclear role definition. It must be clear to anyone considering serving in a linker role, what the purposes of the linker are, exactly what the responsibilities are, what skills are needed, what support services will be provided, what problems are likely to occur, what the chances are for continued employment in or outside of the host-agency, and, very importantly, to whom the linker reports and receives direction. As many of these things as possible should be made clear prior to employment of the linker. These should be reinforced through early training and in early activities on-site. The linker must be provided the opportunity to test out early notions with minimal threat. Inconsistencies should be dealt with immediately and cooperatively. A linker should be given the opportunity and encouragement to ask questions, try out different approaches, and seek resources to assist in the delivery of services to local school groups. There are not a lot of people who have experience as a "linker." There will be a natural tendency for many new linkers to provide direction and service without the use of support agencies, a tendency to be more of a provider than facilitator. This may not be a problem if the linker's contact agencies for providing process and/or informational services are unspecified. However, in the case of PSIP, where the process and information services were specified and a part of the system, any linker may

have difficulty if he/she tends too much to provide information or assistance without including the project-involved agencies. Thus, it is essential that the linker and personnel in the host-agency and support agencies have a consistent understanding at the start of the activities and that there is opportunity for the linker to be a key point in the communications pattern.

b. Marginality

Marginality refers to the possible feeling of not really being a part of an organization or process and thus highly dependent upon specific role performance and other persons for continued involvement, or even employment. Two types of marginality are typically identified relative to linkers. One is marginality with the host-agency and the other is marginality with the client group. While these can be discussed as separate aspects of marginality, they are not independent. A linker who experiences marginality with the host-agency is likely to feel some anxiety that affects performance with clients and accents feelings of marginality with the client group. However, the reverse may be even more a critical issue. A linker who experiences marginality problems in dealing with the client group will have difficulty in working with them. This difficulty, if recognized by the linker host-agency, will compound any host-agency marginality feelings of the linker.

In considering PSIP, a third type of marginality must be considered. Since there was a project management/

evaluation team and a specified set of support agencies, the potential for an additional linker marginality concern must be addressed. While the IU was the formal host-agency for the IU-B linkers, the project staff and agency representatives group became a second, but very influential host-agency for the linker. The potential for difficulty should be apparent. Any linker with two host-agencies can easily be put in the middle.

1) Host-Agency Marginality, IU as Host-Agency

Marginality with the host-agency refers to feelings of the linker arising from conditions of employment. If a linker is a new employee of the host-agency, specifically hired to serve in a new (to the agency) role as a linker, in a temporary system, funded by an external source, with a specific time duration, than host-agency marginality problems of the linker have maximum likelihood. Persons serving in this role must have high tolerance for uncertainty of career futures and must get a great deal of personal satisfaction out of day-to-day role performance. Since success or failure of the project, to a certain extent, depends on their performance, there is an additional pressure placed on their roles. The extent to which there is some possibility of employment in the host-agency beyond the project duration may result in reduction of threats of marginality for this type of linker. It should be pointed out that it is not easy to find effective linkers who are willing to

assume the risks of such a situation. Crandall (1,211) has pointed out that host-agencies tend to think in terms of agency goals in dealing with clients rather than linker goals in dealing with clients. There is a strong need for developing a support system for linkers in the host-agency.

When the linker is already associated with the host-agency in a continuing position, performing in a role similar to the linker role, not reliant on external funding support or success of the project, then marginality problems are minimal. However, if the linker role is a different role than being performed regularly, then the linker may be placed in a position outside of the mainstream of agency operations and suffer from feelings of marginality.

2) PSIP Marginality of the IU Linker

While the linker was hired by the IU, he or she was considered an integral part of the project structure. Perhaps it should be pointed out that in the original project intents, those of agency representatives who developed the original proposal for NIE funding consideration, there was not a clear designation for a person called a "linker." It had been planned to work with local schools through the IU, but the major contacts from outside the site (the SAT) were to be staff from PDE, RBS, and IU's, assisted by RISE and LRDC. There was no mention of a single person linker, housed in the IU. It is this writer's

impression that one of the modifications made at the request of NIE was to have a "linker," since the other NIE-RDU projects have a person who serves as a linker, although he or she might have a different title. This PSIP modification was made without considering the ramifications of having a linker having to be responsive to two host-agencies.

Since the linker was required to rely on project management and SAT representatives for assistance and support, there had to be mutual understanding of roles, services, and communication protocol. Without these, the linker could easily experience marginality problems with PSIP management and SAT staff.

3) Local Site Marginality of the IU Linker

Marginality is also a factor in linker effectiveness in relation to the client group or local site. The quasi-professional nature of teachers has as a consequence the tendency for them to be apprehensive "toward actions that are designed to improve performance because it is feared that such actions will increase the discrepancy between real status and level of aspiration" (4,84).

Linkers are also subject to marginality concerns when dealing with information producers as well as users. Havelock (2,109) points out that: "The linker is necessarily and by definition an in-betweener. He takes from the research world but he is not clearly a part of that world, and he gives to the practice

world while not being clearly a part of that world either. He can attain partial membership in either the practice or research world by overlapping memberships while not achieving full membership; these associations only partly legitimate his preserve."

c. Role Strain/Overload

Role strain occurs when anticipated functions do not take place, or achieve expected outcomes. Large-scale projects such as this always have problems in getting activities started and attempting to keep project activities on schedule with intended outcomes. Role strain can be the result of actions of the linker, actions of the support persons, from feelings of marginality on the part of the linker, or inaccurate linker role definition. Role strain can also be a result of the linker having to work with and/or coordinate the activities of a large number of individuals.

Role strain creates anxiety and it is fairly well recognized that, depending on the person, anxiety can have a facilitative of debilitative effect. A research issue, discussed in the last section of this linkage case study, is in determining the nature of role strain relative to different types of linkers and how personal characteristics of linkers interact with the nature of role strain to affect facilitative or debilitative actions of the linker.

Another aspect of role strain is overload. Overload refers to problems the linker may face in having to

perform multiple functions to multiple client groups. Havelock (2,108) points out a more specific overload problem possibility for information linkers. A structural aspect of the PSIP was purposely designed to reduce overload possibilities through a differentiation of the linker and SAT representative roles. Havelock (2,108) indicates that there are likely to be linker overload problems in terms of amount of information, its complexity, and difficulty in its use. In terms of the amount of information, input usually comes from several outside sources, there may be too much to assimilate, and it may need to be distributed to too many people. Often the input information is highly technical (or poorly described) and is in need of simplification and packaging before being disseminated to potential users. Formatting of information for potential user review may require a great deal of effort. Formatting a focus of information relative to the LAT needs was one of the functions of RISE. However, the extent to which the LAT feels it gets properly focused and useful information on R&D products has a bearing on linker role strain. Recall from earlier discussions the frustration of LAT members at various points because of what they felt was the receipt of information that was not focused for their situation, i.e., use of the PSIP student needs charts in a non-graded school setting. In addition, it was pointed out by the LAT coordinator and principal that had they not found a useful product, the time and effort spent would have been wasteful. Thus, overload

and role strain could occur for the linker if information provided to user groups is perceived by them to be unfocused and not useful.

d. Role Novelty/Non-Routine Tasks

Role novelty refers to the linker being in a new (to the linker) linking type position, without similar prior experiences. Havelock (2,109) refers to one aspect of this as "recency" which relates to feelings of initial marginality. (Recency refers to the origin of the linkage. Any new position is subject to marginality feelings because of the novelty and uncertainty for the linker and the system.) The IU-B linkers were certainly placed in new roles. To the extent that linkers look forward to and understand what is expected of them, role novelty can be a positive factor. If, however, the linker's expectations are not met or are highly discrepant from the actual project happenings, then linker role strain can occur.

e. Inadequate Communications Flow

It is essential that there be good communications flow between the linker and the client group, between the linker and the support agency representatives, and between the client group and support agency representatives as facilitated by the linker. While the critical information linkages are those with the client group, they cannot be effective without good communications between the linker and the support agency representatives. Communications flow affects and is affected by all of the previously mentioned forces. It can be used to reduce potential disruptive

effects of the forces or it can be itself disrupted by existence of these forces. Perhaps the most influential of these forces on communications flow is marginality. Marginality, more than the other forces, seems to be largely a function of interpersonal relationships and attitudes. These seem more difficult to control and turn-around than the other forces. Once individuals develop suspicious and/or antagonistic attitudes toward each other, communications flow will likely be permanently strained.

2. Forces Affecting Linker-1 Effectiveness

While several project personnel felt linker-1 just did not have the skills required of a linker, it should be pointed out that there were several problems encountered by linker-1 that were beyond her control. In addition, these forces did not operate in a linear or additive manner, but in more like a cyclical or multiplicative manner. As certain pressures were placed on linker-1, her reaction would create other problems for her which tended to multiply the effects of the original pressures.

Unclear role definition was a force affecting linker-1's performance. This writer feels that the project staff never completely defined the role of the linker in the PSIP framework. In relation to the complexity of the process used with local sites and the assignments and changes of assignments of SAT agency representatives, the linker role was hard to define. Linker-1 felt she was hired to provide assistance to LAT's who were working in the basic skill area of reading. Role novelty combined with early information overload

("too much, too soon, too fast") got in the way of linker-1's understanding of the role. Recall that she was hired about five months into the project and after the IU-B orientation of district administrators. In addition, it was not clear to linker-1 what roles the various SAT representatives were to play. Linker-1 was not receiving consistent role definition information. Her IU supervisor and the project director had different ideas and plans for how the project would operate in IU-B.

Marginality was a major problem for linker-1. She did not understand which group (PSIP team or IU-B) was her host-agency group. Being a new employee of the IU with no promise of continuing employment beyond the project and being new to the geographic area created some feeling of marginality with the IU. However, being paid through the IU, even though the funds were from PSIP, and being supervised by the IU assistant executive director tended to give her the feeling that the IU was the host-agency. This feeling tended to create project marginality problems for linker-1. It has been pointed out that the IU-B assistant executive director felt responsible and wanted to control project activities in IU-B. Linker-1 was unable to develop working or social relationships with the project staff and SAT representatives. Since she was being told, on one hand, that project staff would decide and control the use of SAT personnel in the IU school and, on the other hand, that the IU would decide and control how much the agency representatives would be used, she was unable to resolve the conflict that was destined to happened. She

experienced social distance problems relative to PSIP staff and agency representatives. The IU-A linker had become so much a part of the social structure that linker-1 felt threatened. Attempts of the PSIP staff and agency representatives could not reduce this social threat enough. When linker-1's performance was then often compared with the IU-A's performance, this just complicated the project marginality feeling of linker-1 even more. It was not long into the project life of linker-1 that the professional conflicts became personal conflicts and from that point there was virtually nothing the PSIP staff or linker could do to remediate the situation. When the linker and IU assistant executive director felt continuing comments of the evaluator on the monthly reports and year-one evaluation summary were personally and professionally offensive, the tension or role strain of linker-1 was accentuated. The marginality problems for linker-1 point out that a linker cannot effectively serve two host-agencies, especially if those agencies have different goals and/or plans for operating. Whether or not the observation is valid that linker-1 did not possess the competencies needed for her role performance, the fact remains that any linker in this situation is going to experience marginality problems with both agencies, but probably less from the one that is the current and projected employment base.

The question may arise as to why the linker in IU-A did not experience the same problems. In this writer's opinion, there are three reasons why he did not. First, and probably the most important, is that the linker in IU-A clearly

perceived the project rather than the IU as the host-agency. This was not a problem because the IU-A linker's supervisor felt no threat and was comfortable with this alignment. Secondly, the linker in IU-A was the only linker for a period of about five months at the start of the project and as such received all the attention, was rapidly assimilated into the project social structure, and was not threatened by being compared with any other linker. Thirdly, the linker in IU-A had an SAT member from LRDC who spent almost all of his time working with him in IU-A activities. The LRDC representative became somewhat of a counselor for the IU-A linker, a person with whom the linker could discuss plans and involve in other than typical SAT representative activities on a continual basis. Linker-1 did not have such a person to rely on for continuous guidance.

Linker-1 did not feel marginality from most of the LAT's in IU-B. Generally, she was viewed as being very helpful and available. Some LAT members felt that some of her presentations were not as clear as they should have been, but in general they were pleased with her work. There was some linker marginality with the LAT in School N. While they were also satisfied with the efforts of linker-1, they seemed to be less supportive than the other IU-B LAT's. This writer feels that this may relate to two factors. One is that this LAT felt very professional and reacted a little more to unclear presentations of linker-1. Also the frustration of the School N LAT in feeling "required" to use the project-determined student

needs assessment process, when the felt it did not fit their situation, to some extent was directed at linker-1.

The previously described situation resulted in linker role strain and overload. The overload was not in terms of dealing with local sites, however. Linker-1's overload was in terms of attempting to deal with the project structure and the social/political dynamics of individual interpersonal relationships. Energies of linker-1 in attempting to deal with these issues greatly prevented much opportunity for her to learn and apply linker strategies. The massive amount of individual training provided linker-1 by the project director and evaluator seemed to have no effect. This was "blamed" on the linker's inability to learn and apply the skills these individuals felt they were getting across to the linker. This writer feels that the personalities got in the way. In this situation, the linker training should have been conducted by someone outside of the project staff. This, however, would probably have not been successful because the environment of linker-1 would not have changed.

The linker's feelings of marginality with project staff and agency representatives significantly strained the communications flow. It was obvious to several LAT members that the linker and SAT agency representatives were not communicating effectively. Linker and SAT agency coordination was not observable to the LAT. LAT members were correct in their observation that "games were being played."

3. Forces Affecting Linker-2 Effectiveness

Linker-2 was brought into a difficult situation. She was required to learn, in a short time, about the purposes and procedures of the project, the role of the linker, the role of SAT members, and the status of the LAT's in IU-B. The potential was high for the same forces that had affected linker-1 affecting linker-2. However, differences in how the project and IU related to linker-2 and differences in how she dealt with problems, as compared with linker-1, reduced the magnitude of these forces.

A great deal of time was spent getting linker-2 oriented and actively involved with SAT agency representatives and LAT's. Linker-2 was able to work into the system relatively quickly. One of the RBS representatives worked closely, on an individual basis, with linker-2 at the start of her time in the project. Linker-2 had feelings similar to linker-2 regarding the role definition. She was not sure exactly how the SAT agency representatives fit into the work with the LAT's. However, she was able to work with an unclear role definition, primarily because she did not have to deal with some of the other forces.

Changes in some of the project procedures lessened the possibility of some of the problems faced by linker-1. There was little public comparison of the activities in IU-A and IU-B and the performance of the IU-A linker and the IU-B linker. The comparisons and conclusions which appeared in the first-year evaluation report were not in the second-year evaluation report.

Linker-2 did not have the marginality concerns that linker-2 had. Relative to the IU as the host-agency, linker-2 did not feel marginality. She had worked in the area for several years as an IU-B funded teacher. She knew the territory. In addition, she agreed to take the position only if the IU agreed to provide her with employment beyond the project. Thus, she was able to take the position with no threat to her future employment in the IU. She had already established rapport with the IU assistant executive director and other IU staff.

She did not experience project marginality. The IU assistant executive director did not continue the same level of involvement or insistance in IU control that he had during the first year. Thus, linker-2 was not placed in a middle position. This permitted her to develop closer relationships with project staff and SAT representatives. The lack of conflict between the project staff and the IU reduced the potential threat to project staff and representatives. Because of this and because linker-2 demonstrated self-confidence, had very good interpersonal skills, including a good sense of humor, and demonstrated a high level of interest in the project, she was accepted quickly into the project social structure.

The same qualities that reduced project marginality concerns tended to serve linker-2 well in establishing rapport and a good working relationship with the LAT's, including the School N LAT. Throughout the work with the School N LAT, the linker was able to provide individual assistance, coordinate work of the SAT agency representatives, keep the group on task,

and assist the LAT in finding resources for implementation. Since the LAT felt they were a very professional group, they expected a linker who demonstrated a high level of professionalism, knowledge and understanding of their school situation, self-confidence, and ability to facilitate LAT-SAT communications. The School N LAT felt linker-2 had all of these attributes and a very personal approach as well.

Linker-2 did experience some role strain and overload at the beginning of her work as the linker. She had little time to get acclimated into the mainstream of the project. She was able to observe some LAT/SAT sessions in IU-B where SAT agency representatives worked with the LAT. This permitted her to get acquainted with the process and some of the LAT's without having to take major responsibility for the meetings. Role strain decreased significantly as time in the position increased.

Linker-2 experienced some effects of role novelty. She had never served as a linker before, thus the learning of new roles and new colleagues took time. Role strain and role novelty did not tend to have any debilitative effect on the work of linker-2.

Relative to the adequacy of communications flow, linker-2 felt they were generally very good. The fact that she was able to develop good relationships with project staff, SAT representatives, and LAT members accounts for good communications flow. There was one communications problem for linker-2. Communications between linker-2 and a RISE representative were, at times, strained. This was because of differing perceptions

of individual roles. Meetings and telephone conversations took place in attempts to rectify the problem, but some minor personality differences have prevented easy and totally effective communications.

4. Mechanisms Used to Deal with Forces Affecting Linker Effectiveness

In general, there were five mechanisms used to deal with forces affecting the effectiveness of the PSIP linkers. They were:

a. Team Approach

b. Linker Training

1) Informal

2) Formal

c. Meetings

d. Materials

e. Role Compensations

While the mechanisms discussed in the first part of this section, dealing with forces affecting inter-agency linkage, have a direct effect on linker effectiveness, there were several mechanisms that were used to reduce forces that might have an adverse effect on linker role performance.

a. Team Approach

The PSIP project structure called for three types of service functions in a team approach to project management and operation. One aspect of this, that of management and evaluation, included the project director and project evaluator. The two local service teams were the linker and the School Assistance Team (SAT). In addition

to providing assistance to local sites, SAT representatives were responsible for developing process materials for use with LAT's. Crandall has pointed out that "working in teams will often minimize some of the day-to-day difficulties experienced by linking agents" (1,212). The team approach permitted role differentiation designed to support project activities, including the work of the linker. Overall coordination was the role of the project management/evaluation group. Assistance was provided to the linker by SAT agency representatives not only in on-site LAT work, but in planning for work with LAT's. One aspect of the PSIP linker support activities which is different than many other linker support strategies should be pointed out. A typical linker or change agent would seek support from a variety of outside support service and information agencies, the choice of which would be pretty much up to the linker. However, in PSIP the linker support services were specified as the SAT agencies. While this provided for easy and fast access to support services, it could somewhat confine a linker's search for outside support and information services. In this situation, the linker and SAT agency representatives had to develop good working relationships or project activities with the local site would suffer. The linker did not have the option to seek the same or similar services from other outside agencies. Therefore, making it work with the project personnel was critical, as there really was

no alternative. The project director had to be aware of the linker-SAT representative relationships and, when necessary, mediate professional and personal differences and make staff modifications.

One aspect of the team approach used in IU-B was the hiring of an assistant to the linker. This individual was responsible for setting up LAT/SAT meetings and taking minutes at meetings. This freed up the linker and LAT/SAT members to concentrate on meeting activities rather than any project documentation activities.

b. Linker Training

Crandall points out the importance of providing training for the total linking role, requiring training to be "coupled with extensive institutional support arrangements." He also states: "Training for new roles is far more difficult than training for specific skills or functions. . . a whole new identity needs to be developed" (1,212). There were two types of training provided for linkers.

1) Informal Training

The most frequent type was somewhat informal training provided by project staff. Primarily, this took the form of meetings held with the linker by the project director, evaluator, and/or SAT agency representatives. Several meetings were held with the linker at the start of the linker's time on the project. Most of the concentration in these meetings was on project process activities with LAT groups.

There was little time spent on linker strategies for working with local teacher groups. Also, this type of training was provided by persons who had not served in the same role as the linker. Another type of informal linker training was the linker's observation of the other IU linker or SAT representative as they conducted LAT/SAT sessions.

2) Formal Training

One formal training session for linkers was held in February 1978, half-way through the project. This was called a "linker awareness" session and was conducted by staff from the Northwest Regional Educational Laboratory and the National Diffusion Network. In addition to the two project linkers, staff from PDE, representatives from other IU's, and SAT representatives participated in the session. A major snow storm cut down on attendance and had some minor disruptive effect on the session. Major topics discussed and topics of exercises included: group dynamics, interpersonal relations, planning for program improvement, conflict resolution and management, and resources available to the linker. While some of the presentations related specifically to PSIP, the great majority related to general linker skill development in any educational change effort. This was the only project-provided linker training activity which had a major focus of developing linker skills in group work.

c. Meetings

In addition to meetings held for project staff linker training, there were several project team meetings. During the first two years of the project, these occurred about every three months. Topics in these meetings usually included progress reports on IU and site activities, management and evaluation issues, reports on involvement of staff or agency representatives in conferences or conversations with interested groups or individuals, planning for LAT/SAT sessions, and development and/or review of process materials. Typically, these meetings would last two or three days. Attendance of other IU representatives, the PDE staff, and NIE representatives occurred frequently. During the third year of the project, team meetings were less frequent; one was held in the Fall and one in the Winter.

d. Materials

There was heavy emphasis placed on the development of materials for linker and SAT representatives to use with local sites. Virtually every step to be taken by the LAT from initial problem statement through planning for evaluation of implementation has been covered by PSIP products. One of the purposes of the work in the two PSIP IU's was to field test these materials. Materials have been revised in terms of clarity and reducing the amount of time to get through the process steps. By the end of the project, these materials had been formed into

a linker handbook which is being used in PSIP-type activities in IU's other than the two original project IU's.

e. Role Compensations

Being a linker, especially in a position funded externally with a specific time duration, can place an individual in an anxious state of mind. It has been pointed out (1,215) that the compensations of the job, other than financial, are often critical to the mental health of the linker and ability to tolerate the role and future uncertainty. There were several role compensation possibilities available to the PSIP linkers. Among them were: the chance to make valuable contacts with other persons in NIE, PDE, the SAT agencies, and the local sites; the possibility of a new employment role, that of a linker or change agent in or outside of the host IU; an increase in knowledge of the development and use of R&D products and the local conditions and activities necessary to facilitate the selection and use of R&D products; and travel to and participation in project and non-project conferences and meetings.

5. Effects of Mechanisms on Linker-1 Effectiveness

As has been pointed out before, linker-1 did not have complete understanding of the linker role and was subject to IU or host-agency marginality concerns, project marginality concerns, and ineffective communications interaction. These factors created role strain which interacted with personal feelings to the point that she felt unable to deal with the situation and, therefore, resigned. She had difficulty

developing working and personal relationships with project staff and SAT representatives. The project mechanisms seemed to have no positive effect; many seemed to have a negative effect. The team approach did not work because linker-1 felt she was not a part of the team. Informal linker training was somewhat effective at the start, but personalitites tended to make it ineffective and even counterproductive. The use of the IU-A linker as a role model was not an effective method of linker training for linker-1. Linker-1 reacted negatively to being compared with the IU-A linker. Formal training, by outside consultants, was not used during the period linker-1 was with the project. Project meetings did not seem to affect linker-1's effectiveness. Many of the meetings, especially the one in September 1977, resulted in personal frustration and greater polarization on the part of the linker, the project staff, and the agency representatives. During linker-1's time on the project, the materials were being developed and field tested. She had difficulty using some of the materials and, at times, would play down their importance and use approaches other than those relating to the materials. This was difficult for SAT agency representatives to deal with and further created feelings of alienation. Role compensations were not effective mechanisms for improving linker-1's performance. For one thing, linker-1 did not feel enough of a part of the project team to appreciate or capitalize on potential learning possibilities and other contacts. She was not involved in the project long enough to experience some other role compensations such as travel and involvement in external project activities.

6. Effects of Mechanisms on Linker-2 Effectiveness

By contrast, the mechanisms were generally effective in improving the effectiveness of linker-2. The reason they were, however, was because she was accepted into the professional and social structures of the project. While many PSIP staff and SAT representatives might not agree with this writer, he feels a conscious or unconscious effort was made to prevent some of the problems that had occurred with linker-1. The project could ill afford another situation like the one that had taken place previously.

The team approach was generally effective for linker-2 because she felt a part of the team. Because the IU assistant executive director reduced his involvement and because linker-2 was able to establish rapport very early with the project staff and agency representatives, she did not suffer from project marginality concerns. The fact that she also did not have a linker--host-agency marginality problem made it easier for her to concentrate on project rather than IU matters.

Informal linker training in the form of project staff and agency representatives was effective in getting the linker oriented and operational. Linker-2 indicated that these training sessions had more of a psychological benefit than actual learning benefit. She cited the opportunity to observe SAT agency representatives work with the LAT's as providing a good role modeling experience and being the most valuable aspect of the informal training process. There were no major effects of the formal linker training program for linker 2.

By the time it took place, linker-2 was well established in her role and modus operandi.

Meetings of the project staff, agency representatives, and the linkers were effective in helping linker-2's role performance. She was an active contributor in meetings. She demonstrated good judgment and command of knowledge of project processes and local conditions which increased her credibility with the group.

Linker-2 felt the project materials were very helpful. She felt the original materials were somewhat cumbersome but the revised ones were more adaptable to local conditions and level of LAT sophistication.

Role compensations, other than financial compensation, have been effective for linker-2. She has made valuable contacts in PDE, the agencies, the IU, and the local sites. Involvement as a presenter and participant in activities at the state and national levels has been valued by linker-2. Linker-2 feels the experience has been valuable; she has learned a great deal about change efforts in local schools, about R&D products, and about R&D support agencies; and she is interested in serving in other linker-type positions within or outside of IU-B.

V. Implications/Recommendations

This section provides the opportunity for the linkage case study writer to make general inferences concerning policy, management, and research issues in the development and maintenance of local educational change efforts based on linkage structures and linker strategies. Topics discussed in this section area ones brought out in this linkage case study of Pennsylvania School Improvement Program operations in IU-B and School N. These implications are not meant to be, nor should they be considered, criticisms of PSIP, only issues which need to be addressed in any large-scale linkage/linker type effort based on arrangements for improving the ability of local school groups to focus on and develop/implement strategies for meeting local educational needs. As has been pointed out, several of these issues were dealt with very effectively through PSIP and linker activies, some were not.

A. Policy

Policy issues are presented in four categories: relationships with the funding agency (NIE), project relationships with sites, inter-agency linkage relationships, and linker level.

1. NIE-PSIP

a. There needs to be clear understanding of goals and methods between the funding agency and the receiving agency. These must be consistent and non-threatening to overall agency purposes and needs.

b. The flow of information upon which decisions are based must be accurate and timely.

c. Changes in procedures and expectations of the receiving agency should be kept at a minimum and be only those which facilitate meeting of both agencies' goals.

d. There should be clearly defined evaluation criteria, purposes, and methods. External site visit teams should be aware of these and purposes of their evaluations clearly defined to be consistent with overall evaluation needs.

e. External evaluators working to develop case study materials should be accountable to only the funding agency or its designated evaluation contractor. Validation of case study analyses should be conducted by other external evaluators. While project staff should be given the opportunity to react to case study results and request changes of fact, they should be be permitted to unduly force changes in interpretations.

2. PSIP-Site

a. It is important to assess the level of quasi-professionalism existing in a local site prior to active involvement. Strategies used with a local group to "tread lightly" to avoid autonomy threats may have a negative effect when used with a group which has high feelings of professionalism. Never make assumptions concerning feelings of quasi-professionalism.

b. A group with high feelings of professionalism will tend to be more interested in the product rather than process of a change effort.

c. There is need for strong local leadership. The principal should be involved but probably not be the only major decision-maker. There is a need for a teacher-leader who has the confidence of the principal and the other teachers.

d. There is need for flexibility in the use of process materials with the local group. It is important to predict

where flexibility might be needed prior to actual use with the local group. Contingencies should be identified and strategies for dealing with them should be planned.

e. If the process takes more time than the local group expects, frustration and short-cutting of procedures are likely to be evidenced. This can lead to failure to keep in mind original needs and intents and may result in the selection of a product for expediency rather than one which is specifically related to identified needs. In addition, the longer the process takes the greater the likelihood that either other mechanisms have been put into operation to deal with the needs or the identified needs may no longer be the most critical.

f. Planning for implementation support should begin early in the project life. Those who will ultimately make the decisions to provide resources for implementation should be kept informed and involved to the greatest extent possible, and should feel they have ownership and responsibility to see that complete implementation takes place.

g. There is strong need for the local participants to feel free to contact the linker or support agency representatives regarding project and non-project related needs for information and assistance, at least to the extent that these agencies provide other than project specific services to other school districts.

h. Local participants do not have a difficult time recognizing any conflict that exists between linkers and support

agency representatives. Care should be used to keep these at a minimum through planning efforts of linkers and support agency representatives prior to work with a local group.

i. If there is a change in linker, expect some testing behavior from the local group regardless of how they felt about the previous linker.

3. Inter-Agency

a. Individual agency responsibilities must be clear to project staff and other agency representatives.

b. Time must be provided for agency representatives working in a structured support system to get to know each other on both social and professional levels.

c. Conflicts between linkers and/or agency representatives should be mediated by the project director and, where possible, role modifications made in situations where the conflict has a negative effect on the overall project or local activities.

d. Do not compare, especially in printed project documents, the work of identifiable individuals working in different settings with different resources/constraints.

e. Routinize to the extent possible the flow of communication between agency personnel. Make communications flow an expected activity.

4. Linker Level

a. A linker cannot operate in a setting with two host-agencies. Even if the agencies have a good cooperative arrangement there are bound to be times when the linker cannot serve both host-agencies.

b. Linker marginality seems to be the most critical problrm for linker effectiveness. Effects of severe linker marginality are virtually irreversible. Both professional and social relationships tend to become strained to the point that they prevent effective linker role performance. Other forces affecting linker effectiveness seem to be more easily corrected.

c. It must be recognized that linkers are often required to deal with a high level of local ambiguity. Thus, support services should not add to feelings of ambiguity. In addition, comparison of the work of linkers, especially using names in project documentation that goes to outside project audiences, can drastically reduce linker morale. There are too many differences in local conditions and personal strategies to make any such comparison valid or useful.

d. It must be recognized that linkers who work with fixed support services, as opposed to those sought by the linker from various alternatives, have additional pressure placed on them. There is little flexibility for the linker and this is essentially a one-shot situation as options for seeking assistance from other support agencies are limited.

e. Training of linkers should occur early and should be conducted by experienced persons who will not ultimately supervise or evaluate the linker.

f. It is important for the linker to be somewhat independent and self-motivated. Opportunity for linker-style development should be permitted. An effective linker must have the

feeling that he/she is adding a part of himself/herself to the success of the process. Individuality and creativity should not be thwarted unless it is obviously disruptive to the progress of the local group.

B. Management

With such a complex set of agencies and personnel associated with this project, there was high potential for management problems. PDE, the overall management agency, RBS, and LRDC are multiple-mission agencies. RISE is the only agency which has a fairly well-defined, singular mission. Agencies with multiple-missions tend to be more subject to providing personnel with different personal and professional motivations and individuals who receive varying rewards for participation. In addition, multiple-mission agencies may have internal influences which affect personnel continuity and ability to provide concentrated assistance.

There are three areas of management which should be discussed: management of project activities, management of information flow and internal evaluation, and institutionalization.

1. Management of Project Activities

a. Project staff who have not been involved in developing original project design need to be given the opportunity to develop methods and/or materials in order for them to feel a sense of ownership.

b. It is important that agency representatives understand their roles and the expectations for service delivery.

c. There is a need for coordination of overall project activities of support agency personnel. Flexibility in modifying agency and personnel responsibilities must exist.

d. In any large-scale project, there are likely to be changes in linkages, especially as a project moves from linkages used for development to linkages for institutionalization. Some anxiety will have to be dealt with when the linkage priorities change, such as when the support agency linkages used to design process materials become secondary to the linkages developed to use the process materials on a wider scale with an expanded group of local school districts.

2. Management of Information Flow and Internal Evaluation

a. Project management is responsible for dissemination of information to internal and external audiences. The likelihood of extending the life of linkage arrangements is increased through information dissemination.

b. It is important that the project director facilitate information flow between agency personnel, the linkers, and local participants.

c. When personnel are used to a high level of information flow which becomes reduced, there may be some feeling of anxiety and/or mistrust.

d. The role of an internal evaluator is to provide information to project decision-makers. Any internal evaluator who takes on other roles such as content specialist or quasi-management may be unable tc maintain objectivity. An internal evaluator should have a clearly-defined role of project documentation and should be a non-reactive staff member.

e. An internal evaluator should not become too closely involved with project staff, at least to the point where he/she becomes biased by personal relationships.

f. Project documentation should not include names and/or comments which could be considered to be a personally offensive tone, especially documentation sent to funding agencies, R&D agencies, and external evaluators. Such practice borders on unethical if not lack of privacy protection behaviors. The project director should monitor the evaluation reports and ensure that this does not occur. Internal evaluation should document issues and events, not create them.

3. Institutionalization

a. Institutionalization should be planned for very early in the life of a project.

b. Internal groups should be kept informed and involved to reduce territoriality threats.

c. Major decision-makers who will decide on future institutionalization should be kept informed as to progress and project expansion for serving the client groups.

d. Presentations at national and state meetings help increase external audience interest and knowledge and, thus, chances of institutionalization.

C. Research

There are several research issues which should be presented. They are categorized as follows: inter-agency and project level, linker level, and local site level.

1. Inter-Agency and Project Level

   a. There is a need for research to further examine influences of the interaction of linkage status at the start of the project (new, existing) and direction of resource or service flow (vertical, horizontal) on typical forces affecting linkage development and maintenance.

   b. What are the most effective ways of extending linkage life beyond a specific funding period?

   c. How can anxiety be reduced when the need for developmental linkages becomes secondary to service implementation linkages?

   d. What are the most effective linker training strategies to develop the set of skills needed by the linker at different process and transition points?

   e. How can internal evaluation methods provide unbiased information that is non-reactive and not personally threatening?

2. Linker Level

   a. What are the problems resulting in linker marginality when the linker is forced to deal with more than one host-agency? How can such problems be eliminated or their effects reduced?

   b. Are there predictable patterns of the forces affecting linker effectiveness? Which forces affect the others in a predictable way? Which are reversible and what mechanisms are effective in reducing negative effects?

c. Which forces tend to provide for facilitative rather than debilitative anxiety and how do these relate to linker personality and skills characteristics?

d. What are the evaluation threats to the linker? How can evaluation be conducted for program improvement rather than perceived personnel evaluation?

e. What are the effects on linker performance of having a fixed as opposed to variable set of information and process support services? Are there situations when one of these structures tends to work better than the other?

3. Site Level

a. How does level of quasi-professionalisms effect linker-based change efforts at the local level? What variables can be measured to assess quasi-professionalism prior to active local site work? What strategies are appropriate for varying levels of quasi-professionalism?

b. What are the effects of the amount of time spent in project process activities on tendencies to select products that may or may not be responsive to original or new needs?

c. What are effective mechanisms for developing upper-level administrative and school board support for the provision of implementation funds?

Readers of this linkage case study may have conceptualized some preliminary answers to some of these questions or thought of other questions. To the extent that this linkage case study helps answer such questions and raise other questions, it will have served a purpose in greater understanding of the potential for and problems associated with large-scale change efforts based on inter-agency linkage arrangements.

## REFERENCES


1. Crandall, D. P. "Training and Supporting Linking Agents," In Nash, N. and Culbertson, J. (Eds.), Linking Processes in Educational Improvement. UCEA, 1977.

2. Havelock, R. G. "Dissemination and Transition Roles," In Eidell, T. and Kitchell, J. (Eds.), Knowledge Production and Utilization. UCEA and CASEA, 1968.

3. Miles, M. B. "Planned Change and Organizational Health," In Baldridge, J. V. and Deal, T. E. (Eds.), Managing Change in Educational Organizations. Berkeley, CA: McCutchan Corp., 1975.

4. Sieber, S. D. "Organizational Influences on Innovative Roles," In Eidell, T. and Kitchell, J. (Eds.), Knowledge Production and Utilization. UCEA and CASEA, 1968.